USM

University Of Southern Mississippi

BULLETIN

GRADUATE PROGRAMS 1970-1971

ACCREDITED BY:

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NATIONAL COMMISSION ON ACCREDITING

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GRADUATE PROGRAMS

1970-1971

FALL QUARTER OPENS SEPTEMBER 7, 1970

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1970

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CALENDAR

GENERAL CALENDAR 1970-1971

FALL QUARTER - 1970

Wednesday, August 19, 1970
Deadline for making application for admission

Thursday and Friday, September 3 and 4
Various pre-quarter faculty and departmental meetings (faculty on duty)

Sunday, September 6
Dormitories open

Tuesday, Septemmber 8
5:00 P.M. Registration for night and graduate courses

Wednesday, September 9
Registration by appointment
6:30- 8:00 P.M. Monday night classes meet (this week only)
8:30-10:00 P.M. Wednesday night classes meet (this week only)

Thursday, September 10
Continuation of registration by appointment
Last day to register without late registration fee
6:30- 8:00 P.M. Tuesday night classes meet (this week only)
8:30-10:00 P.M. Thursday night classes meet (this week only)

Friday and Saturday, September 11 and 12
8:00 P.M. Classes meet on schedule (Saturday classes meet on Monday day schedule)
8:00 P.M. Fee for adding and dropping courses effective on Friday, September 11

Friday, September 18
Last day for registering or adding Fall Quarter courses

Wednesday, September 23
Last day for dropping courses without academic penalty

Saturday, October 10
Graduate School Foreign Language Tests

Friday and Saturday, October 16 and 17
Qualifying and Comprehensive Examinations in Education

Monday, October 19
Beginning of second term of Fall Quarter — only date for adding or registering for second term courses

Thursday, October 22
English Proficiency Examination

Saturday, October 24
Graduate Record Examinations

Saturday, October 31
Miller Analogies Test

Saturday, November 7
Admission Test for Graduate Study in Business

Saturday, November 14
National Teacher Examinations

Monday, November 16
Last day of regularly scheduled classes

Tuesday, November 17
Study period for examination

Wednesday, Thursday, Friday, Saturday, November 18, 19, 20, 21
Fall Quarter Examinations

WINTER QUARTER - 1970 - 1971

Tuesday, November 10, 1970
Deadline for making application for admission for the Winter Quarter

Monday November 30
5:00 P.M. Registration for night and graduate courses

Tuesday, December 1
Registration by appointment

Wednesday, December 2
Continuation of registration by appointment
Last day of registration without late fee
6:30- 8:00 P.M. Monday night classes meet (this week only)
8:30-10:00 P.M. Wednesday night classes meet (this week only)

Saturday, December 12
Graduate Record Examinations

Wednesday, December 16
Last day for dropping courses without academic penalty

Friday, December 18
6:00 P.M. Christmas holidays begin

Monday, January 4, 1971
8:00 A.M. Class work resumed

Saturday, January 9
Miller Analogies Test

Saturday, January 16
Graduate Record Examinations

Wednesday, January 20
8:00 A.M. Beginning of second term of Winter Quarter—only date for adding or registering for second term courses without penalty

Friday and Saturday, January 22 and 23
Qualifying and Comprehensive Examinations in Education

Thursday, January 28
English Proficiency Examination

Saturday, January 30
National Teacher Examinations

Saturday, February 6
Graduate School Foreign Language Tests
Admission Test for Graduate Study in Business

Monday, February 22
Last day of regularly scheduled classes

Tuesday, February 23
Study period for examinaitons

Wednesday, Thursday, Friday, Saturday, February 24, 25, 26, 27
Winter Quarter Examinations

Saturday, February 27
Last day to file application for May graduation

SPRING QUARTER - 1971

Tuesday, February 16, 1971	Deadline for making application for admission for the Spring Quarter
Monday, March 8 5:00 P.M.	Regisration for night and graduate courses
Tuesday, March 9	Registration by appointment
Wednesday, March 10	Continuation of registration by appointment Last day to register without late fee
6:30- 8:00 P.M.	Monday night classes meet (this week only)
8:30-10:00 P.M.	Wednesday night classes meet (this week only)
Thursday, March 18	Last day for registering or adding Spring Quarter courses
Saturday, March 20	Miller Analogies Test
Tuesday, March 23	Last day for dropping courses without academic penalty
Tuesday, March 30	University of Southern Mississippi Day
Saturday, April 3	Admission Test for Graduate Study in Business National Teacher Examinations
Thursday, April 8 6:00 P.M.	Easter holidays begin (Thursday night and Saturday morning classes will meet)
Tuesday, April 13 8:00 A.M.	Class work resumed after Easter holidays
Friday and Saturday, April 16 and 17	Qualifying and Comprehensive Examinations in Education
Saturday, April 17	Graduate School Foreign Language Tests
Monday, April 19	Beginning of second term of Spring Quarter — only date for adding or registering for second term courses
Thursday, April 22	English Proficiency Examination
Friday, April 23	Last day to present signed dissertations to Graduate Office for May Graduation
Saturday, April 24	Graduate Record Examinations
Monday, May 17	Last day of regularly scheduled classes and last day to present signed thesis to Graduate Office for May Graduation
Tuesday, May 18	Study period for examinatoins
Wednesday, Thursday, Friday, Saturday, May 19, 20, 21, 22	Spring Quarter Examinations
Saturday, May 22 7:30 P.M.	Graduation Exercises Last day to file application for August graduation

SUMMER QUARTER - 1971

Tuesday, May 18	Deadline for making application for admission for the Summer Quarter
Monday, June 7 5:00 P.M.	Registration for night and graduate courses
Tuesday, June 8 8:00 A.M.	Registration by appointment Only day to register for Summer Quarter without late fee
Wednesday, June 9 8:00 A.M.	Classes meet as scheduled Fee for adding and dropping courses effective Wednesday, June 9
6:30- 8:00 P.M.	Monday night classes meet (this week only)
8:30-10:00 P.M.	Wednesday night classes meet (this week only)
Thursday, June 10 6:30- 8:00 P.M.	Tuesday night classes meet (this week only)
8:30-10:00 P.M.	Thursday night classes meet (this week only)
Friday, June 11	Last day for registering or adding first term courses
Tuesday, June 15	Last day for dropping first term courses
Wednesday, June 16	Last day for registering or adding full quarter courses
Saturday, June 19	Graduate Record Examinations
Tuesday, June 22	Deadline for making application for admission for the second term of the Summer Quarter Last day for dropping full quarter courses
Saturday, June 26	Admission Test for Graduate Study in Business
Friday, July 9	First term examinations
Saturday, July 10	Miller Analogies Test
Monday, July 12 8:00 A.M.	Registration for second term of Summer Quarter Second term courses may be added without change of schedule fee
Wednesday, July 14	Last day for registering or adding sceond term courses
Thursday, July 15	English Proficiency Examination
Friday, July 16	Last day to present signed dissertations to Graduate Office for August Graduation Last day for dropping second term courses

SUMMER QUARTER - 1971

Friday and Saturday, July 16 and 17
Qualifying and Comprehensive Examinations in Education

Saturday, July 17
National Teacher Examinations

Saturday, July 24
Graduate School Foreign Language Tests

Monday, August 9
Last day of regularly scheduled classes and last day to present sgined thesis to Graduate Office for August Graduation

Tuesday, August 10
Study period for examinations

Wednesday, Thursday, Friday, Saturday, August 11, 12, 13, 14
Summer Quarter Examinations

Saturday, August 14
7:30 P.M. Graduation Exercises

PART ONE

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ADMINISTRATIVE OFFICERS

THE GRADUATE COUNCIL

THE GRADUATE FACULTY

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1 Resigned end of Fall Quarter
2 Effective Winter Quarter
3 Effective January 1, 1970
4 Leave of Absence, 1969-1970

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2 Resigned end of Fall Quarter
3 Retired end of Winter Quarter
4 Deceased
5 Effective December 1, 1969
6 Leave of Absence
7 Effective January 1, 1970

PART TWO

THE GRADUATE SCHOOL

THE GRADUATE SCHOOL

The Graduate School at the University of Southern Mississippi was established in 1947 to recognize the University's growing responsibilities as a center of higher learning, and to provide an academic environment in which advanced research and free inquiry could develop to the advantage of both the student and the State. In the years since 1947, the University's graduate programs have developed logically on the growing points of strong undergraduate schools and departments to meet the needs for professional competence beyond the academic measure of the baccalaureate degree.

The Graduate School's Place Within the University Structure

The Graduate School is administered by a Dean executing policies determined by the Graduate Council of which the Dean of the Graduate School serves as chairman.

The present composition of the Graduate Council (see Part I) includes the Dean of the Graduate School as chairman with two representatives each from the College of Arts and Sciences and the College of Education and Psychology and one representative each from the School of Business Administration, the School of Fine Arts, and the School of Home Economics. Council members are appointed by the President of the University upon the recommendation of the Dean of the University. Permanent **ex officio** members are the President of the University and the University Librarian. The University Registrar serves as secretary to the Council.

The responsibilities of the Graduate Council, representing both administration and faculty, include:

1. Determining policies of admission to the Graduate School.

2. Considering and approving graduate programs submitted to the Council through curriculum committees of each college and school.

3. Electing members to the Graduate Faculty upon recommendation by the academic deans.

4. Approving new courses and deleting courses for graduate credit.

5. Acting upon any other problems affecting graduate programs.

The graduate programs approved by the Council are carried out through the Graduate Faculty (see Part I of this **Bulletin**) in each degree-granting college or school of the University's academic organization.

Degree and Specialist Programs Offered

The University of Southern Mississippi now offers graduate level programs in nearly every recognized academic discipline. Even those departments not yet ready to offer master's or doctoral degrees are usually equipped to offer a graduate minor.

The degrees which are offered and their fields are listed below.

DOCTOR OF PHILOSOPHY

Biology
Chemistry
Educational Administration
Elementary Education
English
Geography
Guidance
Physical Education
History
Mathematics
Music Education
Political Science
Psychology (Clinical)
Psychology (General-Experimental)
Secondary Education
Speech and Hearing Sciences

DOCTOR OF EDUCATION

Educational Administration
Educational Psychology
Elementary Education
Guidance
Physical Education
Psychology
Psychology (Clinical)
Secondary Education

DOCTOR OF MUSIC EDUCATION

Music Education

MASTER OF PHILOSOPHY

Biology
Chemistry
English
Geography
History
Mathematics
Political Science
Science Education
Speech and Hearing Sciences

SPECIALIST CERTIFICATE

Business Education
Curriculum and Supervision
Educational Administration
Elementary Education
Guidance and Counseling
Secondary Education

MASTER OF ARTS

Biology
Chemistry
Communication
Economics
English
Foreign Languages
Geography
Geology
History
Library Science
Mathematics
Philosophy
Political Science
Psychology
Sociology
Speech and Hearing Sciences
Theatre

MASTER OF SCIENCE

Biology
Business Education
Chemistry
College Counseling
Communication
Community Counseling
Economics
English
Foreign Languages
Geography
Geology
Health
History
Home Economics
Industrial Arts
Library Science
Mathematics
Physics
Political Science
Psychology
Reading
Recreation
Science Education
Secondary Education
Speech and Hearing Sciences

MASTER OF EDUCATION

Business Education
Early Childhood Education
Educational Administration
Elementary Education
Health and Physical Education
School Counseling
Secondary Education
Special Education
Supervision of Instruction

MASTER OF BUSINESS ADMINISTRATION

Business Administration

MASTER OF MUSIC

Applied Music
Music History and Literature
Theory - Composition

MASTER OF MUSIC EDUCATION

Music Education

The undergraduate, master's, and specialist programs in teacher education are accredited by the National Council for Accreditation of Teacher Education.

See Part V of this **Bulletin** for the department curricula covering each of these degrees and the specialist programs.

PART THREE

ADMISSION REQUIREMENTS AND PROCEDURES

FINANCIAL INFORMATION

ADMISSION REQUIREMENTS AND PROCEDURES

Since applicants must always be admitted to a specific program within the Graduate School, all applications for admission to the Graduate School are closely reviewed and must be approved by the chairman of the department in which the student intends to study, by the school or college dean, and by the Graduate Dean. Admission forms are procurable from and should be submitted to the University Admissions Office.

The aptitude phase (verbal and quantitative sections) of the Graduate Record Examination is required of all applicants to the Graduate School except in the School of Business Administration which requires the Admission Test for Graduate Study in Business. Prospective students should plan to take the appropriate examination, given several times a year at a number of university testing centers, early in their senior year and request that a copy of their scores be sent to the Graduate Office. The dates set for these examinations are listed in the General Calendar of this **Bulletin.** Applications are available in the Graduate Office.

It should be clearly understood that the admission requirements listed below represent the minimal standards set by the Graduate Council and that additional requirements and higher standards may well be stipulated by the various department chairmen.

TYPES OF ADMISSION TO MASTER'S PROGRAMS

I. **Regular Admission:**

A. The applicant must hold a baccaluareate degree from an institution approved by a recognized accrediting agency.

B. The applicant must be eligible to re-enter in good standing the last college or university he attended.

C. The applicant must present evidence, by official transcript (two copies), of a grade-point average of at least 2.75 (figured on an A equals 4.0 scale) for the last two years of undergraduate study, and a grade-point average of at least 3.0 on undergraduate courses in the field of proposed graduate study. Any exception to this requirement must be cleared with the appropriate department chairman, the dean concerned, and the Graduate Dean.

D. The applicant must present a combined score of 750 or above on the aptitude sections of the Graduate Record Examination. Certain departments within the University require higher totals and/or the advanced section of the Graduate Record Examination. Consult specific departmental requirements for this informaiton.

E. The appropriate department chairman, the school or college dean, and the Graduate Dean must be satisfied that the applicant shows promise of satisfying graduate degree requirements.

II. **Conditional Graduate Student:**

A student who does not meet the minimum admission standards for either grade-point average or Graduate Record Examination may be admitted on a conditional basis in one of two ways:

A. He must present a score of 750 or above on the aptitude sections of the Graduate Record Examination and a grade-point average no lower than 2.5.

B. He must present a grade-point average of 2.75 or above if he has scored lower than 750 on the aptitude sections of the Graduate Record Examination.

Conditional admission can be given only upon the specific recommendation of the department chairman, the school or college dean, and the Graduate Dean.

A conditional graduate student must meet the following conditions if he is to continue in the Graduate School:

A. If his first enrollment is as full-time student, he must make grades of B or better on each graduate course attempted during that first quarter.

B. If his first enrollment is as a part-time student, he must make grades of B or better on his first twelve (12) quarter hours, or grades of B or better on all courses taken while completing the twelve-hour requirement.

All courses taken to remove conditional admission must be taken on the Hattiesburg campus. Upon the recommendation of the department chairman and the Graduate Dean, the conditional admission may be removed and the student reclassified as a regular student.

III. **Special Graduate Student:**

Admission as a special graduate student may be granted a student for any of the following reasons:

A. He can not meet requirements for a conditional or regular admission but desires to enroll in graduate courses.

B. He may or may not be able to meet admission requirements, but does not desire to work toward a graduate degree.

C. He is enrolled in another graduate school and desires to take work at the University of Southern Mississippi to be transferred to the graduate school in which he is seeking a degree.

A special graduate student must hold a baccalaureate degree from an accredited institution. If he should decide to become a degree-seeking student, he must meet the grade-point average and Graduate Record Examination requirements for regular or conditional admission.

A student may remain classified indefinitely as a special graduate student; however, no more than sixteen (16) quarter hours earned while classified as a special graduate student may be applied toward a graduate degree at the University of Southern Mississippi. The Graduate Dean may revoke the admission of a special graduate student should his work become unsatisfactory.

Special graduate students desiring to enroll on the Hattiesburg campus will be expected to file an application for admission by the appropriate deadline.

Students may be admitted as special graduate students to the School of Business Administration only if they have undergraduate grade point averages of 2.75 or above.

A graduate student of any classification may count a total of no more than sixteen (16) quarter hours of extension work, transfer work, resident center work, and special graduate work toward a master's degree.

TYPES OF ADMISSION TO ADVANCED GRADUATE STUDY

Three advanced level programs are available for students who hold a master's degree and who wish to do additional graduate work. The first of these programs leads to the Educational Specialist Certificate, the second to the Master of Philosophy degree, and the third to the various doctoral degrees.

I. Regular Admission:

For regular admission to advanced graduate study a student must present a grade point average no lower than 3.25 for the specialist and the Master of Philosophy programs or 3.50 for the doctoral program on previous graduate work and a score no lower than 800 for the specialist and the Master of Philosophy programs or 850 for the doctoral program on the aptitude phase of the Graduate Record Examination.

II. Conditional Admission:

For conditional admission to advanced graduate study a student must present either (a) a grade point average of between 3.00 and 3.25 for the specialist and the Master of Philosophy programs or 3.25 and 3.50 for the doctoral program on previous graduate work and a Graduate Record Examination score no lower than 800 for the specialist and the Master of Philosophy programs or 850 for the doctoral program or (b) a grade point average no lower than 3.25 for the specialist and the Master of Philosophy programs or 3.50 for the doctoral program and a Graduate Record Examination score between 750 and 800 for the specialist and the Master of Philosophy programs or 800 for the doctoral program.

Conditional status at the advanced graduate level may be removed on the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on his first twelve (12) or sixteen (16) hours of course work numbered 500 or above on all courses taken while completing this requirement.

To be admitted to advanced graduate study, the student must submit a formal application through the Admissions Office even though he may have successfully completed a master's degree program at the University of Southern Mississippi. Acceptance as an advanced graduate student is contingent upon the approval of the department chairman, the school or college dean, and the Graduate Dean.

III. Special Graduate Student:

An applicant for advanced study may be admitted as a special graduate student under the same conditions outlined for a master's degree applicant.

Limitations on University Faculty Members

Members of the faculty of the University of Southern Mississippi above the rank of instructor cannot become candidates for a doctoral degree at this institution. They may, however, enroll for graduate courses. Faculty members of the rank of instructor may become candidates for doctoral degrees at the University of Southern Mississippi on the same terms as any other advanced graduate student candidates.

PROCEDURES FOR APPLYING FOR ADMISSION

I. Application materials are available from the Director of Admissions, Southern Station, Box 11, Hattiesburg, Mississippi 39401.

II. All credentials (application, recommendations, medical examination record, two official transcripts from each institution attended) must be submitted to the Director of Admissions by the deadline published in the University Calendar.

III. After all credentials are received, the Admissions Office will compute the applicant's grade point average and will forward the application and transcripts to the appropriate department chairman, school or college dean, and the Graduate Dean. As soon as the application has been processed by the department chairman, the school or college dean concerned, and the Graduate Dean, the Director of Admissions will notify the applicant of the University's decision on his request for admission.

Permission for Undergraduate Seniors to Register for Graduate Credit

Exceptionally well qualified undergraduate students at the University of Southern Mississippi may apply to the Graduate Office for permission to take course work for graduate credit if they are within (8) quarter hours of meeting bachelor's degree requirements as certified by the Registrar. If the Graduate Dean approves, the student may then register for graduate courses up to a maximum of eight (8) quarter hours of graduate credit with a total course load not exceeding sixteen (16) quarter hours. The student must complete requirements for the baccalaureate degree within the first quarter in which he registers for graduate courses. The student's application for admission to the Graduate School will not be given final approval until after he satisfies all requirements for the baccalaureate degree.

STUDENT EXPENSES

The University of Southern Mississippi is supported chiefly by legislative appropriations. Increases in student fees are put into effect only when public support funds are inadequate and no other recourse is available. Increases are made only for support of the institution or improvement of the activity program of the students; therefore **the University must reserve the right to increase or modify fees and expenses without prior notice but with approval of the Board of Trustees of State Institutions of Higher Learning.**

Fees and expenses are in the form of incidental fees, room and board, and special fees.

INCIDENTAL FEE. This fee, together with the allocation from the legislative appropriations, is used for general support of the University and consists of charges for matriculation, library, athletic activities, health service, University Union, University newspaper, laboratory, concert series, maintenance, etc. Athletic activities, health service, and newspaper are not included for part-time students.

Full-time students for purposes of assessing fees are as follows: Graduate School, nine (9) or more quarter hours; all other schools and colleges, twelve (12) or more quarter hours. Students enrolled for more than eighteen (18) hours will be assessed the applicable fee for each additional quarter hour. (Students training under Veterans Administration programs on the graduate level are required by the Veterans Administration to carry a minimum of twelve (12) quarter hours for the entire quarter to receive full subsistence.)

Clinical and hospital services covered by the health service charge included in the incidental fee are limited to cases of ordinary illness. Services are provided within the limits of the professional, technical, and physical resources of the Clinic. The University does not assume responsibility in cases of extended illness or for treatment of chronic diseases. Cases requiring surgery must be handled by a physician and hospital of the student's choice.

ROOM AND BOARD. The room and board fees are assessed for all students living in University-controlled dormitories and those students living in fraternity houses. All students rooming in dormitories or fraternity houses are required to take their meals in the University Commons. Students living in Elam Arms and Hillcrest will eat in the cafeterias in those residence halls.

A room deposit of $15.00 is payable in advance for the reservation of space in the dormitories. This amount is held as a breakage deposit until a student withdraws from the dormitory.

A student accepting dormitory space will be financially obligated to pay a full quarter's room rent. A refund of the dormitory fee will be made only upon withdrawal from the University.

OTHER FEE INFORMATION. Fees of all students are due and payable at time of registration; however, fees of **full-time** students may be paid one-half upon entrance and the balance one week prior to the beginning of the second half of the quarter.

Transcripts of credits will not be issued for students whose accounts are delinquent.

A fee of $2.00 is assessed each quarter to all full-time students for operation of the University Union. A $1.00 fee is added to the incidental fee assessment of part-time students.

Courses requiring special fees and music fees are shown in the Special Fee listing (Table II).

A fee of $6.50 for **The Southerner** (University annual) is payable each school year by all full-time undergraduate students.

NON-RESIDENT STATUS. The Legislature of the State of Mississippi has passed the following legislation concerning non-resident status:

The board of trustees of each junior college in this state, the board of trustees of state institutions of higher learning, and the administrative authorities of each institution governed by said boards, in ascertaining and determing the legal residence of and tuition to be charged any student applying for admission to such institutions, shall be governed by the following definitions and conditions:

Legal residence of a minor. The residence of a person less than twenty-one (21) years of age is that of the father. After the death of the father, the residence of the minor is that of the mother. If the parents are divorced, the residence of the minor is that of the parent who was granted custody by the court; or, if custody was not granted, the residence continues to be that of the father. If both parents are dead, the residence of the minor is that of the last surviving parent at the time of that parent's death, unless the minor lives with a legal guardian of his person, duly appointed by a proper court of Mississippi, in which case his residence becomes that of the guardian.

Legal residence of an adult. The residence of an adult is that place where he is domiciled, that is, the place where he actually physically resides with the intention of remaining there indefinitely or of returning there permanently when temporarily absent.

Removal of parents from Mississippi. If the parents of a minor who is enrolled as a student in an institution of higher learning move their legal residence from the State of Mississippi, the minor is immediately classified as a non-resident student.

Twelve months of residence required. No student may be admitted to any institution of higher learning as a resident of Mississippi unless his residence, as defined hereinabove, has been in the State of Mississippi for a continuous period of at least twelve (12) months immediately preceding his admission.

Residence in an educational institution not counted. A person who has entered the State of Mississippi from another state and enters an educational institution within twelve (12) months is considered a non-resident. For this reason, any period of time when such a person is enrolled in any educational institution in Mississippi may not be counted as any part of the twelve (12) months prerequisite to his admission to an institution of higher learning as a resident student. Even though he may have been legally adopted by a resident of Mississippi, or may have been a qualified voter, or a landowner, or may otherwise have sought to establish legal residence, such a person will still be considered as being a non-resident of Mississippi if he has entered this state for the purpose of enrolling in an educational institution.

Residence status of a married woman. A married woman may claim the residence status of her husband, or she may claim independent residence status under the same regulations, set forth above, as any other adult.

Children of parents who are employed by institutions of higher learning. Children of parents who are members of the faculty or staff of any institution under the jurisdiction of the board of trustees may be classified as residents during the time that their parents are such faculty or staff members without regard to the residence requirement of twelve (12) months, for the purpose of attendance at the institution where their parents are faculty or staff members.

Aliens. All aliens are classified as non-residents.

Students holding fellowships. Non-resident students holding University financed fellowships will not be required to pay the non-resident fee during the time they hold such appointments.

REFUND POLICY. A student who officially withdraws from the University after enrollment may obtain a refund in accordance with the following:

a. A refund of 90% of incidental and special fees paid will be made to a student who withdraws within eight (8) days following the last calendar day of registration.

b. A full-time student who withdraws for any reason prior to midterm of any quarter but following eight (8) days after the last calendar day of registration will be refunded 50% of the incidental and special fees.

c. A full-time student who withdraws after midterm of any quarter will not be entitled to a refund of fees.

d. A part-time student will not be entitled to a refund of fees after eight (8) days from the last calendar day of registration.

e. A student enrolled for evening classes will receive no refund unless withdrawal is made prior to the second meeting of the class.

f. No adjustment of incidental and special fees will be made when courses are dropped after eight (8) days from date of registration.

g. Room and board fees are refunded on the basis of full weeks remaining in the quarter.

TABLE I

EXPENSES EACH QUARTER

(Fees may change. See statement on page 38)

FULL-TIME STUDENTS

Fixed Fees

Incidental Fee	$159.00
*Room rent—air-conditioned dormitory	100.00
Room rent—other dormitory	70.00
*Board	90.00

Other Fees When Applicable

Non-resident fee	$200.00
The Southerner	6.50
Post Office box, per quarter	1.25

PART-TIME STUDENTS—Each quarter hour

Incidental fee—graduate student	$ 18.00
Non-resident fee—graduate student	23.00

*Hillcrest (Room and Board)	$248.00
Elam Arms (Room and Board)	248.00
Vann Hall (Room and Board)	210.00

TABLE II

SPECIAL FEES AND EXPENSES

Music Fees—Private Lessons for other than full-time music majors:

1 quarter hour per instructor	$ 19.00 per quarter
2 quarter hours per instructor	36.00 per quarter
3 quarter hours per instructor	53.00 per quarter
Each additional supervised lesson	17.00 per quarter
Orchestral or Band Instrument rental*	6.00 per quarter

Summer Conferences and Workshops;**

Aviation Education Workshop
Library Science Workshop
Preschool Teachers Workshop
Reading Conference
School Lunch Managers Workshop
Special Education Workshop
Summer Music Camp

Examinations and Graduation:

Miller Analogies Test	$3.50	when applicable
Revalidation Examination	5.00	when applicable
Special Examination	3.00	when applicable
Graduation fee—* * *		
Master's	12.00	with application for degree
Specialist Certificate	12.00	with application for certificate
Doctoral	90.00	with application for degree
Thesis binding per copy	4.50	when applicable

Registration and Records:

Change of Schedule	$ 5.00	when applicable
Audit Fee—(non-credit) * * * *	9.00	per quarter hour
Late Registration	10.00	full load
	5.00	partial load
Application fee for foreign students (Non-refundable)	10.00	with application
Memorandum of credits	.50	when applicable
Transcript of credits	1.00	when applicable

*This fee applies to music majors and minors as well as to other students.

**The fees for the above conferences and workshops will be listed in the brochures published for each conference. The conference and workshop fees do not include the assessment for incidental fee where University credit is desired, nor do they include the conference charge for room and board.

* * * Requests for refund of this fee will be based on circumstances existing at the time of request in accordance with policy on file.

* * * * An audit fee is charged when the student does not wish to receive credit in a course. Courses such as physical education activity courses, typing, shorthand, German 73, French 73, and English 23 will be assessed at the full rate ($18.00 graduate) even though the student registers as an auditor.

AVAILABLE FINANCIAL ASSISTANCE FOR GRADUATE STUDENTS

At present the University has available some 180 master's and 50 doctoral University fellowships in all areas as well as fellowships provided by federal and private agencies. Though amounts may vary from department to department, University fellowships average $1500 per year at the master's level and $2000 at the doctoral level and entail a teaching or research assignment. Out-of-state tuition, though not the incidental fee, is currently waived for fellowship holders. The University also currently waives out-of-state tuition for a limited number of Regional Merit Scholars and for students on sabbatical leave from schools and colleges.

Inquiries regarding fellowships should be directed to the Graduate Office.

EQUAL EDUCATIONAL OPPORTUNITY POLICY

The University of Southern Mississippi does not discriminate on grounds of race, color, or national origin.

PART FOUR

GENERAL ACADEMIC REGULATIONS AND REQUIREMENTS

GENERAL ACADEMIC REQUIREMENTS

It is reasonable to assume that a graduate student accepts full responsibility for knowing the policies and regulations of the Graduate School and the departmental requirements relevant to his individual degree program.

Only the general academic regulations and requirements governing all graduate programs are given below. Specific requirements pertaining to individual degree programs are outlined within the departmental sections.

Course Work and Grading System

Courses open to graduate students are of two categories: (1) those numbered G300 to G499 which are open to advanced undergraduates as well as to graduate students; and (2) those numbered 500 or above which are open only to graduate students.

Students registered for any course numbered from G300 and G499 are required to have graduate standing before the extra work required for graduate credit may properly be assigned or graduate credit granted. The assignment of this extra work is left to the discretion of the instructor concerned but should approximate a fifty per cent increase in laboratory or library work over that required of undergraduate students in the same course.

All courses have certain prerequisites. A student who wishes to register for a particular course must satisfy the department concerned that he has had preparation adequate for admission to the course.

The grading system in the Graduate School is as follows:

A—Indicates that the student's work is of unusually high quality.

B—Indicates that the student's work is of high but not exceptional quality.

C—Indicates that the student has met the minimum requirements for passing the course.

D—Indicates that the student's work is below that which is expected of a graduate student. A course in which the student has earned a grade of D will not apply toward a graduate degree. A student who earns more than eight hours in grades of D or below may not be considered as a candidate for a degree. Retaking a course will not remove this disability.

F—Indicates that the student has failed the course. A student who accumulates more than four (4) quarter hours of F grades will not be considered as a candidate for a degree. Retaking a course will not remove this disability.

An average of B or better is required of all candidates for graduate degrees by the time they complete the course-hour requirements for the degree.

In computing averages, a C must be balanced by one A, a D by two A's, and an F by three A's of equal graduate credit.

The one-year limitation for an "Incomplete" to be removed does not apply to theses. The general regulation that degree work must be completed within a six-year period does apply.

Course Loads

I. Although the maximum load of a full-time graduate student is seventeen (17) quarter hours, the normal load for a full-time graduate student is generally considered to be twelve (12) quarter hours; the normal time required for a master's degree is thus four quarters.

II. The minimum load for a full-time graduate student is nine (9) quarter hours for the purpose of living in Pine Haven, using the services of the Clinic, for Selective Services deferments, and other such requirements.

III. The usual load for a part-time student with a full-time position is four (4) hours. A maximum of eight (8) hours may be carried by such a student provided the faculty adviser and department chairman approve.

(Teachers should note that the Mississippi State Department of Education allows a full-time teacher to take only four (4) hours per quarter.)

IV. Thirteen (13) hours is the maximum load for a graduate fellow teaching, one undergraduate class or its equivalent. In no case may the total hours involved in a student's program, including both his course work and his fellowship assignment, exceed seventeen (17) hours.

V. The incidental fee for the full load of nine (9) quarter hours will be the same amount as paid by graduates for a normal load of twelve (12) hours.

VI. The course numbered 597, 697, 797 — **Independent Study and Research** — may be taken for any amount of credit with the execption that students who are not in residence but who are actively working on a thesis or dissertation and consulting with the major professor or making use of the library or other University facilities must enroll for four (4) quarter hours each quarter.

MASTER'S DEGREE REQUIREMENTS

A convenient checklist of master's degree requirements may be procured in the Graduate Office.

I. **Credit Hours:**

A minimum of forty-six (46) quarter hours of credit is required for any master's degree.

II. **Time Limitation:**

The student must complete the master's degree within six calendar years from the date of initial enrollment as a graduate student. Six years is the maximum age allowed for graduate credits toward a master's degree. If more than six years are needed to complete requirements, the Graduate Dean, under extenuating circumstances, may revalidate overage credit hours if the original credit was earned at the University of Southern Mississippi and if the dean of the college or school concerned approves the revalidation. The revalidation is secured by the student's successfully passing a special examination on the course. However, any student who fails to complete his master's degree program within the six-year time period becomes subject to any changes in degree requirements made at any date six years prior to his graduation. The fee charged for the special revalidation examination is $5.00 per course. This fee is to be paid before the revalidation examination. Over-age extension courses can not be revalidated.

III. **Credit Hour Limitations:**

A. A minimum of thirty (30) quarter hours must be earned on the University's Hattiesburg campus.

B. A minimum of twenty-four (24) quarter hours must be in courses numbered 500 or above.

C. As many as nine (9) quarter hours of graduate credit from other accredited institutions may be transferred to the student's program with the approval of the appropriate department chairman and the Graduate Dean provided that the course work transferred falls within the six-year period allowed for the degree.

D. As many as eight (8) quarter hours of course work taken by extension may be accepted toward the master's degree provided that such courses were taught by a member of the University of Southern Mississippi graduate faculty.

E. **However,** a student may apply a total of no more than nine (9) quarter hours by extension and/or transfer toward a master's degree, and, as previously stated, a total of no more than sixteen (16) quarter hours of extension work, transfer work, resident center work, and work earned as a special graduate student may be applied toward a master's degree.

F. No more than twelve (12) quarter hours earned in institutes may be applied toward a master's degree.

IV. **The Master's Committee:**

The student's work toward the master's degree is supervised by a departmental committee composed of a chairman and two members recommended by the department chairman and appointed by the Graduate Dean.

V. **The Minor Field**

If a minor field is required in the master's program, it shall consist of sixteen (16) quarter hours of course work.

VI. **The Master's Thesis:**

Although the degree of Master of Arts usually entails the writing of a thesis, the thesis requirement is generally optional for the Master of Science and the Master of Education degrees. Students intending to pursue a degree higher than the master's are encouraged to write a thesis.

A separate bulletin outlining University requirements concerning the preparation of theses is available in the Graduate Office.

VII. **Examinations:**

A. The aptitude phase of the Graduate Record Examination or of the Admission Test for Graduate Study in Business is required for admission into the Graduate School. Individual departments may require the advanced area tests.

B. The Graduate School Foreign Language Test is required for some master's degrees, particularrly the Master of Arts. Languages other than French, German, Spanish, and Russian must be approved by the department chairman and the Graduate Dean. The dates of these examinations are listed in the University Calendar and students may procure the proper registration forms in the Graduate Office.

C. If a master's degree student has not had an English writing proficiency test on the undergraduate junior or senior level, he will be required to take the University English Proficiency Test.

D. In addition to regular course examination, final comprehensive examinations are required for master's degrees. The major department will determine whether the comprehensive examination will be written or oral or both. The written comprehensive, if required, will be prepared by the student's committee and will cover the area of the major field. If an oral examination is required, the chairman of the student's committee will send written notices of the time and place of the examination to the examiners and to the student and will conduct the examination. Comprehensive examinations, whether written or oral, will be administered no later than the seventh week of the quarter in which the student expects to receive his degree and their results reported by the department chairman to the Registrar and to the Graduate Office no later than Monday of the eighth week of that quarter. A student who fails the comprehensive examination may not retake the examination until its next regular administration and may repeat the examination only once.

EDUCATIONAL SPECIALIST CERTIFICATE REQUIREMENTS

The Educational Specialist Certificates earned in the departments of Administrative Personnel and Services, Business Education, Curriculum and Instruction, and Guidance provide sixth-year programs designed to prepare students for positions in school administration, advanced technical education for business, teacher training, and guidance and counseling. Individual programs and requirements are fully described in the departmental sections of this **Bulletin.**

Students who are seeking the Educational Specialist Certificate must meet all degree requirements relating to the master's degree, must earn at least forty-six (46) quarter hours beyond the master's degree, must write an acceptable thesis and defend it in an oral examination, and must complete one full-time quarter of residence taking all twelve (12) hours on the Hattiesburg campus.

Credit earned in institutes cannot be applied toward a specialist certificate.

THE MASTER OF PHILOSOPHY DEGREE REQUIREMENTS

The Master of Philosophy (M. Phil.) provides a directed semiterminal degree beyond the master's in a subject area primarily for the benefit of junior college faculties. At present the Southern Association of Universities and Colleges requires that "in all colleges at least forty per cent of the teaching faculty should possess professional preparation equivalent to two years of advanced study beyond the bachelor's degree." This degree more than fulfills this requirement and in addition provides an intermediate stepping stone for the student who wishes to pursue the Doctor of Philosophy at a later time.

General Requirements

I. The program consists of a minimum for forty-six (46) hours of work beyond the master's degree or ninety-two (92) hours beyond the bache-

lor's degree in one subject matter area of which no more than six (6) hours can be in thesis research. With departmental permission, a related minor of twelve (12) hours can be elected. At least one half of the work in both the major and minor areas must be in courses numbered 500 or above. No more than twelve (12) quarter hours or nine (9) semester hours by extension or transfer can apply to the degree nor is any institute or project credit applicable. Junior college teachers can substitute a course in the philosophy and administration of the junior college for one of their minor area courses.

II. Proficiency in a foreign language or, with departmental permission, in computer science and/or statistics is required unless the student's master program includes such a requirerment.

III. One quarter of full-time work on the Hattiesburg campus constitutes the residency requirement for the degree.

IV. A departmental qualifying examination, a thesis of considerable scope, a written comprehensive examination covering the entire discipline, and a final oral examination of the thesis are required.

V. Since the work done for the Master of Philosophy degree is applicable to the Doctor of Philosophy degree, it can be awarded only by departments authorized to grant the Doctor of Philosophy degree, and all departments presently so authorized are permitted to grant the Master of Philosophy. At present, these areas are biology, chemistry, English, geography, history, mathematics, political science, science education, and speech and hearing sciences.

Completion of the Doctor of Philosophy Degree

1. In order to achieve the Doctor of Philosophy degree the student holding a Master of Philosophy degree must take at least thirty-six (36) additional hours of course work, of which twelve (12) hours may be in research leading to the dissertation and of which twenty (20) must be in courses numbered 500 or above.

2. He must spend three (3) consecutive quarters of full-time study on the Hattiesburg campus in order to fulfill the residency requirement.

3. He must achieve proficiency in a second language (or in computer science and/or statistics) if he has not previously done so.

4. He is required to take a rigorous written examination in the specialized area of his discipline in which he plans to write his dissertation.

5. He must write an acceptable dissertation and defend it orally.

DOCTORAL DEGREE REQUIREMENTS

A convenient checklist of doctoral degree requirements may be procured in the Graduate Office.

I. **Credit Hours**

All doctoral degrees entail a minimum of 118 quarter hours of course work beyond the bachelor's degree or seventy-two (72) quarter hours of course work beyond the master's degree.

II. **Time Limitation:**

Courses taken above the master's degree or its equivalent which will fit into the degree program but which are six or more years old at the time of admission to the advance graduate program may be counted toward meeting degree requirements when recommended by the department chairman and approved by the Graduate Dean.

The degree requirements must be completed within a period of six years after the student has been admitted to advanced graduate standing at the University of Southern Mississippi.

III. **Credit Hour Limitations:**

A. A minimum of forty-eight (48) hours of work beyond the master's degree must be earned on the University's Hattiesburg campus.

B. Transfer of credit for graduate work done at other institutions must be approved by the department chairman and Graduate Dean. Final evaluation of and acceptance of transfer credit will not be made until the student has been in residence for one quarter. Transfer of credit for doctoral degree programs is limited to not more than six (6) semester hours or nine (9) quarter hours beyond the master's degree. Exceptions to this restriction may be made with the approval of the department chairman and the Graduate Dean.

C. No credit earned in institutes can be applied toward a doctoral degree.

D. No more than sixteen (16) quarter hours earned as a special graduate student may be applied toward a doctoral degree.

IV. **Residency:**

The residence requirement for a doctoral degree consists of three consecutive quarters during which the student devotes his full time to graduate work and so earns a minimum of twelve (12) hours of credit for each of the three quarters.

A student who holds a double fellowship or an assistantship may fulfill this residence requirement by earning a total of thirty-six (36) hours of credit during consecutive quarters on the Hattiesburg campus of the University. The summer quarter may be counted in this sequence at the option of the candidate. A student may not fulfill the residency requirements if he is employed in a regular position.

V. **The Doctoral Committee:**

The student's work toward the doctoral degree is supervised by a departmental committee composed of a chairman and four members recommended by the department chairman and appointed by the Graduate Dean.

VI. **The Minor Field:**

If a minor field is required in the doctoral program, it shall consist of sixteen (16) quarter hours of course work and may consist of courses from a number of related areas.

VII. **Examinations:**

A. The aptitude phase of the Graduate Record Examination or the Admission Test for Graduate Study in Business is required for admission into the Graduate School. Individual departments may require the advanced area tests.

B. The Miller Analogies Test is required of all doctoral students in the College of Education and Psychology.

C. If a doctoral student has not had an English writing proficiency test on either the baccalaureate or master's level, he will be required to take the University English Proficiency Test.

D. The foreign language and statistics requirements for the doctoral degree may be fulfilled in several ways:

1. The Doctor of Education degree does not require foreign language proficiency. However, the student must establish proficiency in statistics or computer science either by examination or by completing a prescribed course sequence, the credit hours for which do not apply toward the degree.

2. The Doctor of Philosophy degree requires either (1) proficiency in two languages, (2) proficiency in one language and in statistics or computer science, or (3) proficiency in one language and the completion of a twelve-hour minor, the hours for which do not apply toward the degree. Languages other than French, German, Spanish, and Russian must be approved by the department chairman and the Graduate Dean. The particular option followed by the student must have the approval of the department chairman.

E. All students must take a written and/or oral doctoral qualifying examination in their field and in the College of Education and Psychology in the Foundations of Education as well. This examination should be taken during the first or second quarter of the student's enrollment and is designed both to judge the student's fitness to pursue doctoral work and to guide his advisory committee in planning his program. The qualifying examination may be retaken only once.

F. At the completion of his course work and other examinations, the doctoral student is required to take a written and/or oral comprehensive examinaiton in his major and minor field.

G. After the dissertation has been accepted and after all required course work has been completed, but at least four weeks before the candidate is scheduled to receive his degree, a final oral examination on the dissertation and related fields will be conducted by the student's advisory committee and any other faculty members designated by the Graduate Dean. The examination will be open to any member of the graduate faculty.

VIII. **The Dissertation:**

The dissertation topic must be approved by the student's major professor and advisory committee and must be an original contribution to knowledge in the chosen field.

A separate bulletin outlining University requirements concerning the preparation of dissertations is available in the Graduate Office.

The student should register for 798 — **Dissertation** — during the quarter in which defends his dissertation.

IX. **Documents:**

The doctoral student must file a number of documents with the Graduate Office.

A. After his doctoral committee has been appointed and his qualifying examination completed but before he has passed thirty-six (36) hours of doctoral course work, he should prepare in conjunction with his adviser a "Doctoral Planning Sheet," one copy of which is to go to each member of his committee and two copies to the Graduate Office.

B. After the student has completed all the requirements for the doctoral degree other than the dissertation but at least two quarters prior to graduation he should file two copies of the "Application for Candidacy" form with the Graduate Office and one copy with his adviser.

C. The student should present three copies of the "Application for Degree" form, properly stamped by the Business Office, to the Graduate Office during the quarter preceding that of graduation.

D. When completed, the student's file in the Graduate Office should contain in addition to the three documents described above statements from his adviser and/or department chairman appointing his doctoral committee, approving his dissertation prospectus, acknowledging the receipt of a first draft of his dissertation, and verifying the successful completion of his qualifying and comprehensive examinations and dissertation defense. Also contained in his file should be statements of proficiency in language and/or statistics.

PART FIVE

DEPARTMENTAL REQUIREMENTS AND DESCRIPTIONS OF COURSES

COLLEGE OF LIBERAL ARTS

COLLEGE OF EDUCATION AND PSYCHOLOGY

COLLEGE OF SCIENCES

SCHOOL OF BUSINESS ADMINISTRATION

SCHOOL OF FINE ARTS

SCHOOL OF HOME ECONOMICS

COLLEGE OF LIBERAL ARTS

Claude E. Fike, Dean

J. Frederick Walker, Associate Dean

The College of Liberal Arts offers the Doctor of Philosophy degree in English, geography, history, political science, and speech and hearing sciences.

The Master of Arts and Master of Science degrees are offered in communication, English, foreign languages, geography, history, philosophy, political science, social science (with several departments cooperating), sociology, and speech and hearing sciences.

With the approval of the major professor and the chairman of the major department, the student may choose a graduate minor from any of the above-listed fields. A student in the College of Liberal Arts may also choose a graduate minor in education or psychology from the College of Education and Psychology, or in economics from the School of Business Administration, always subject to the approval of the major professor and the chairman of the major department.

Various departments of the College of Liberal Arts also participate with the College of Education and Psychology in programs leading to the Master of Education degree.

Since the master's degree in social sciences is normally intended for teachers, students interested in this degree should consult the Dean of the College of Liberal Arts and the Dean of the College of Education and Psychology, who will jointly arrange suitable degree programs with the appropriate chairmen.

For general academic requirements and regulations governing each of these degree programs, see Part IV of this **Bulletin.**

For **specific** degree requirements of each department, consult the appropriate department in Part V of this **Bulletin.**

DEPARTMENT OF COMMUNICATION

Forrest D. Tucker, Chairman

Bishop Everett George Gregory Gwin Willis

The Department of Communication offers the Master of Arts or the Master of Science degree in the two graduate major areas of public address and communication. Master's degree programs consist of a minimum of forty-six (46) hours, half of which must be numbered 500 or above, excluding thesis credits. A suitable outside minor of sixteen (16) hours, if elected, can be included in this total.

While a thesis is recommended for either degree, the non-thesis plan can be elected. Ordinarily the non-thesis plan is appropriate for candidates with substantial professional media experience. Master of Arts degree candidates must demonstrate proficiency in one foreign language and elect the thesis plan. Proficiency in statistics is desirable in both plans.

COURSE DESCRIPTIONS

COMMUNICATION (COM)

G-430—**Business and Industrial Communication.** Four hours.

G-447—**Theories of Mass Communication.** Four hours.

G-451—**Source Credibility and Public Image.** Four hours.

530—**Problems in Business and Industrial Communication.** Four hours.

544—**Modern Theories of Meaning.** Four hours.

545—**Process and Effects of Communication.** Four hours.

568—**Social Dissemination of Information and Innovation.** Four hours.

570—**Communication Seminar.** Four hours. May be repeated once.

591—**Research in Communication.** One to twelve hours.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis in Public Address or Communication.** Six hours.

600—**Introduction to Graduate Research in Communication.** Four hours.

610—**Content Analysis of Communications.** Four hours.

620—**Design and Administration of Communication Field Studies.** Four hours.

623—**Communication Models.** Four hours.

627—**Comparative International Communications Systems.** Four hours.

710—**Technological Developments in Mass Communications.** Four hours.

712—**Seminar in Mass Media Control and Ethics.** Four hours.

791—**Research in Communication.** One to twelve hours.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Non-credit.
Not to be counted toward a degree.
Students who are not in residence but who are actively working on a dissertation and counseling with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

PUBLIC ADDRESS (PA)

G-432—**Symbolic Function in Persuasion.** Four hours.

G-438—**Theories of Speech Behavior.** Four hours.
Study of interrelationships of communication theory and psychology, linguistics, computer analysis, and information theory.

G-453—**Campaign Speaking.** Four hours.

575—**History and Criticism of American Public Address.** Four hours.

JOURNALISM (JOU)

G-421—**Public Relations.** Four hours.

G-422—**Publicity Methods.** Four hours.

G-423—**Public Relations Practices.** Four hours.

G-431—**Business and Professional Publications.** Four hours.

G-443—**Supervision of High School Publications.** Four hours.
Designed to prepare high school teachers to direct the production of high school newspapers and yearbooks.

G-455—**Newspaper Organization and Management.** Four hours.

G-456—**Public and Press Relations Management.** Four hours.

RADIO-TELEVISION-FILM (RTF)

G-424—**Radio and TV Law.** Four hours.

G-426—**Radio Station Management.** Four hours.

G-445—**Audience Analysis.** Four hours.

G-492—**Special Problems in Radio and Television.** Four hours.

DEPARTMENT OF ENGLISH (ENG)

William D. Norwood, Jr., Chairman

Howard Bahr, Director of Graduate Studies

H. Anderson J. Anderson M. Brown Everett Kay
McCartney McCraw Moorman Orange Pierle
P. Prenshaw J. Smith

The Department of English offers programs leading to the Doctor of Philosophy, Master of Philosophy, Master of Arts, Master of Science, and Master of Education degrees. General academic requirements for all graduate degrees are at forth in Part IV of this **Bulletin.** Specific departmental requirements for each degree are stated in information sheets obtainable at the English Office, College Hall 210.

COURSE DESCRIPTIONS (ENG)

G-406—**History of the English Language.** Four hours.

G-408—**The Structure of Modern English.** Four hours.

G-414—**The American Literary Renaissance, 1820-1870.** Four hours.

G-416—**The Rise of Realism in American Literature, 1870-1920.** Four hours.

G-418—**The American Novel, 1920-1960.** Four hours.

G-419—**Modern American Poetry.** Four hours.

G-420—**American Drama.** Four hours.

G-423—**Shakespeare's Comedies and Tragicomedies.** Four hours.

G-425—**Shakespeare's Histories and Tragedies.** Four hours.

G-427—**The English Novel from Defoe to Dickens.** Four hours.

G-428—**The English Novel from Thackeray to Woolf.** Four hours.

G-429—**Sixteenth Century English Literature.** Four hours.

G-430—**Studies in Comparative Literature.** Four hours. May be repeated for credit as topics vary for a total of twelve hours.

G-431—**Studies in English Literature.** Four hours. May be repeated for credit as topics vary for a total of twelve hours.

G-432—**Studies in American Literature.** Four hours. May be repeated for credit as topics vary for a total of twelve hours.

G-433—**Advanced Grammar.** Four hours.

G-434—**English Syntax.** Four hours. An examination of analytical methods, including generative transformations.

G-435—**Nineteenth Century English Literature.** Four hours.

G-436—**Nineteenth Century American Literature.** Four hours.

G-437—**Studies in Linguistics.** Four hours. May be repeated as topic varies for credit to a total of twelve hours.

G-443—**Readings in World Literature I.** Four hours

G-444—**Readings in World Literature II.** Four hours.

G-446—**Readings in World Literature III.** Four hours.

G-447—**Major Writers of the Eighteenth Century.** Four hours.

G-453—**Medieval English Literature.** Four hours.

G-473—**Analysis of Poetry.** Four hours.

G-474—**The Modern European Novel.** Four hours.

G-480—**Modern European Poetry.** Four hours.

G-483—**Modern Drama.** Four hours.

G-485—**Literature of the South.** Four hours.

G-486—**Seventeenth-Century Prose and Poetry.** Four hours.

G-487—**Milton.** Four hours.

G-488—**Chaucer.** Four hours.

500—**Bibliography and Methods of Research in English.** Four hours. Required of all beginning graduate students in English.

502—**Anglo-Saxon.** Four hours.

503—**The Development of Modern English.** Four hours. Prerequisite: English 434-G-434 or permission of instructor.

504—**Middle English.** Four hours.

505—**Seminar in American Literature.** Four hours.

506—**Beowulf.** Four hours.

508—**Seminar in Non-Dramatic Renaissance Literature.** Four hours.

510—**Seminar in Pope and His Contemporaries.** Four hours.

511—**Seminar in English Romanticism.** Four hours.

513—**Seminar in Medieval Epic and Romantic Literature.** Four hours.

515—**Seminar in Modern Poetry.** Four hours.

520—**Seminar in Analysis of Linguistic Structure.** Four hours. Prerequisites: ENG 408-G-408 or permission of instructor.

580, 581—**Tutorial in English and Germanic Philology I, II.** Eight hours. 4-4.

592—**Special Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged. Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course

598—**Thesis.** Six hours.

605—**Seminar in American Literature before 1900.** Four hours.

607—**Seminar in American Literature after 1900.** Four hours.

608—**Seminar in Renaissance Drama.** Four hours.

610—**Seminar in Johnson and His Contemporaries.** Four hours.

611—**Seminar in Victorianism.** Four hours.

613—**Seminar in Medieval Poetry and Drama.** Four hours.

615—**Seminar in Modern Fiction and Drama.** Four hours.

620—**Readings in Linguistics.** Four hours.

622—**Special Studies in Linguistics.** Four hours.

791—**Research in English.** One to twelve hours.
Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF FOREIGN LANGUAGES

Thomas T. Chisholm, Acting Chairman
Craddock R. Johnson Neumann Scheel

The Department of Foreign Languages participates in the program leading to the Master of Arts degree in French, German, and Spanish. As a prerequisite, the student must present the equivalent of an undergraduate major in the foreign language in which he plans to major on the graduate level. If the undergraduate major does not include 405, 406, 407, or the equivalent, he must include G-405, G-406, G-407 in his graduate program. The student may elect either of the two following plans of study:

1. Master of Arts degree with a thesis:

A minimum of forty-six (46) hours of graduate courses is required, half of which must be in courses numbered above 500. The student must take thirty (30) graduate hours (including the thesis) in the major language and sixteen (16) graduate hours in an academic minor field approved by his major professor and the department chairman. The Department strongly recommends a second foreign language as his minor; however, if the student does not elect another foreign language as his minor, he must demonstrate, by examination, proficiency in a second foreign language.

2. Master of Science degree:

This degree is for the student who does not intend to proceed to a more advanced degree. The plan of study is basically the same as the above plan, except that the student may substitute for the thesis eight (8) additional graduate hours in the major language, and proficiency in a second foreign language is not required.

COURSE DESCRIPTIONS

FRENCH (FRE)

73—**Graduate Reading Course.** Non-credit.
Designed to prepare the graduate student for the reading knowledge examination in French.

G-405—**French Classicism.** Four hours.
Prerequisite: FRE 307.

G-406—**French Romanticism.** Four hours.
Prerequisite: FRE 307.

G-407—**French Realism and Naturalism.** Four hours.
Prerequisite: FRE 307.

G-421—**French Literature of the Twentieth Century.** Four hours.
Prerequisite: FRE 307.

521—**Corneille.** Four hours.

522—**Racine.** Four hours.

523—**Moliere.** Four hours.

531—**The Age of Enlightenment.** Four hours.

541—**The Romantic Poets.** Four hours.

542—**Nineteenth-Century Novel.** Four hours.

592—**Advanced Studies in French.** Four hours.
Prerequisite: FRE 307.
May be repeated for credit when topics vary.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

GERMAN (GER)

73—**Graduate Reading Course.** Non-credit.
Designed to prepare the graduate student for the reading knowledge examination in German.

G-405—**German Classicism.** Four hours.
Prerequisite: GER 307.

G-406—**German Romanticism.** Four hours.
Prerequisite: GER 307.

G-407—**German Naturalism and Expression.** Four hours.
Prerequisite: GER 307.

G-421—**Contemporary German Literature.** Four hours.
Prerequisite: GER 307.

521—**Goethe and Schiller in their Weimar Periods.** Four hours.

522—**Goethe's FAUST.** Four hours.

523—**German Drama after Goethe.** Four hours.

531—**German Poetry from Holderlin to the Present.** Four hours.

541—**The German NOVELLE in the Nineteenth and Twentieth Centuries.** Four hours.

551—**German Expressionism.** Four hours.

592—**Advanced Studies in German.** Four hours.
Prerequisite: GER 307.
May be repeated for credit when topics vary.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

SPANISH (SPA)

73—**Graduate Reading Course.** Non-credit.
Designed to prepare the graduate student for the reading knowledge examination in Spanish.

G-405—**The Golden Age.** Four hours.
Prerequisite: SPA 305.

G-406—**Nineteenth-Century Literature of Spain.** Four hours.
Prerequisite: SPA 306.

G-407—**The Generation of 98 and Contemporary Literature of Spain.** Four hours.
Prerequisite: SPA 306.

G-421—**Cervantes and the Renaissance.** Four hours.
Prerequisite: SPA 305.

522—**Spanish Theatre of the Golden Age.** Four hours.

525—**El Quixote.** Four hours.

541—**Spanish Poetry and Drama of the Nineteenth and Twentieth Centuries.** Four hours.

545—**Spanish American Poetry from Dario to the Present.** Four hours.

551—**Modern and Contemporary Prose in Spain.** Four hours.

553—**Modern and Contemporary Prose in Spanish America.** Four hours.

592—**Advanced Studies in Spanish.** Four hours.
Prerequisite: SPA 305.
May be repeated for credit when topics vary.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

DEPARTMENT OF GEOGRAPHY (GHY)

Arthell Kelley, Chairman

Dunigan R. Hatcher McCutchen McKee

The Department of Geography participates in programs leading to the Master of Arts, Master of Science, and Doctor of Philosophy degrees. For the Master of Arts degree the student must complete forty-six (46) hours in the Department of Geography, write an acceptable thesis, and have a reading knowledge of one foreign language. A minor for the Master of Arts dgeree is optional.

For the Master of Science degree the student must take forty-eight (48) hours, thirty-two (32) in geography and sixteen (16) in an outside minor.

The general requirements for the doctoral degree as set forth in Part IV of this **Bulletin** are applicable to students seeking the doctorate in the Department of Geography.

COURSE DESCRIPTIONS (GHY)

G-410—**Geography of the United States and Canada.** Four hours.

A regional study of Anglo-America covering people, resources, products, trade, and world relation.

G-412—**Aerial Photograph Interpretation.** Four hours.

G-418—**Geography of South America.** Four hours.

G-420—**Geography of the Caribbean Countries.** Four hours.

G-431—**Geography of the South.** Four hours.

G-433—**Geography of Southwest Asia.** Four hours.

G-437—**Geography of the U.S.S.R.** Four hours.

A regional survey of the physical, economic, and cultural geography of the U.S.S.R.

G-438—**Geography of Europe.** Four hours.

G-439—**Geography of Monsoon Asia.** Four hours.

A regional study, with emphasis on India, China, Japan, and Indonesia.

G-440—**Geography of Africa.** Four hours.

G-441—**Geography of Australia and Pacific Islands.** Four hours.

G-445—**Industrial and Commercial Geography.** Four hours.

Includes a short survey of geographic principles governing secondary and tertiary production.

G-450—**Physiography of North America.** Four hours.

Prerequisites: GLY 101 and 103 or consent of instructor.

A study of the character of the physiographic provinces of North America.

G-460—**Historical Geography.** Four hours.

A study of how geography has influenced American history, exploration, setlement, and political, industrial, and social development.

G-480—**Climatology.** Four hours.

A detailed study of types of world climates. Reference made to distribution of patterns of vegetation, soil, and population resulting from climates.

G-484—**Urban Geography.** Four hours.

Nature, distribution, principal functions of urban settlements and supporting areas with emphasis on the United States and local field study.

G-485—**Field Geography.** Four hours.

A study of the techniques of reconnaissance and detailed field work, including classification of natural and cultural features and preparation of reports and maps based on field data. Instruction will cover the use of the compass and hand level, the plane table, and aerial photographs in field mapping.

G-486—**Urban Field Methods.** Four hours.

501—**General Seminar.** One hour.

504—**Primary Production.** Four hours.

506—**Secondary Production.** Four hours.

508—**Tertiary Production.** Four hours.

510—**Advanced Cartography.** Four hours.

512—**Photogrammetry.** Four hours.

514—**Advanced Climatology.** Four hours.

516—**Landforms.** Four hours.

518—**Geography of Soils.** Four hours.

520—**Theory of Regions.** Four hours.

522—**Quantitative Methods of Area Analysis.** Four hours.

540—**History and Development of Geographic Thought.** Four hours.

550—**Seminar in Western Hemisphere.** Four hours.

554—**Seminar in Eastern Hemisphere.** Four hours.

571—**Seminar in Political Geography.** Four hours.

572—**Seminar in Historical Geography.** Four hours.

574—**Seminar in Urban Geography.** Four hours.

591—**Problems in Geography.** Four hours.

592—**Problems in Geography.** Four hours.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

601—**Problems in Economic Geography.** Four hours.

611—**Problems in Physical Geography.** Four hours.

650—**Problems in Western Hemisphere.** Four hours.

653—**Cultural Geography.** Four hours.

654—**Problems in Eastern Hemisphere.** Four hours.

680—**Population and Settlement.** Four hours.

681—**Theory and Methodology in Geographic Research.** Four hours.

684—**Problems in Urban Geography.** Four hours.

791—**Research in Geography.** One to twelve hours.
Prerequisite: Approval of the major professor.

797—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF HISTORY (HIS)

J. Ray Skates, Chairman

Anglin Bowers R. Brent Davis Fike Gonzales Guice
Harper McCarty McMillen Scarborough von Wahlde

The Department of History participates in programs leading to the degrees of Master of Arts, Master of Science, and Doctor of Philosophy.

MASTER'S DEGREES

Requirements for Master of Arts:

1. A total of forty-six (46) quarter hours is required with fifty percent of work in courses on the 500 level.

2. A thesis is required with six hours credit.

3. A sixteen (16) hour minor is optional in agreement with the major professor.

4. The student must take (first quarter in residence, if offered) either History 504 or 506, depending upon the field of his thesis.

5. A reading knowledge of one foreign language is required.

6. After the satisfactory completion of the course work and the thesis, the student will take a comprehensive oral examination, which will be given at stated times throughout the year, usually during the seventh week of a quarter. Comprehensive examinations must be arranged when the candidate's major professor is present.

Requirements for Master of Science:

1. A total of forty-eight (48) quarter hours is required, with fifty percent of work in courses on the 500 level.

2. The thesis is optional.

3. An outside minor of sixteen (16) hours is required.

4. The student must take (first quarter in residence, if offered) either History 504 or 506, after consultation with his major professor.

5. After the satisfactory completion of the course work, the student will take a comprehensive oral examination, which will be given at stated times throughout the year, usually during the seventh week of a quarter. The comprehensive examination must be arranged when the candidate's major professor is present.

Fields:

1. For the Master of Arts and Master of Science degrees, history is divided into the following fields:

   (1) U. S. History to 1763
   (2) U. S. History, 1763-1848
   (3) U. S. History, 1848-1900
   (4) U. S. in the 20th Century
   (5) Medieval History
   (6) Europe, 1870 to Present
   (7) Latin America
   (8) Russia to 1917
   (9) Russia Since 1917
   (10) Britian, 1485-1760
   (11) Britain, 1760-present
   (12) Europe, 1870-1919
   (13) Europe, 1919-present
   (14) A specialized field which might include The Far East, The Middle East, Africa, etc.

2. The Master of Arts candidate must demonstrate proficiency in the field of his thesis, plus one field in U. S. history and one in a non-U. S. field.

3. The Master of Science degree requires proficiency in three fields of history and the outside minor. The history fields offered must include at least one U.S. and one non-U.S. field.

General Regulations:

The student is held responsible for following all graduate regulations. The student's major professor will help in any way possible, but the student is expected to know what is required and to take full responsibility. The procedure is explained fully in Part IV of this **Bulletin.**

Graduate Comprehensive Examinations: It is understood that candidates for the master's and doctoral degrees must pass **all fields in** their comprehensive examinations. To this end, the following procedures will govern future examinations:

(A) Master's Examinations

If the candidate fails to satisfy his major professor, he is deemed to have failed and must retake the entire examination. If he fails to satisfy **one** minor professor, he automatically receives a **conditional pass** and must satisfy that professor of his proficiency in that field within six month or he will be required to retake the entire examination. If the candidate is re-examined, his overall proficiency will be determined by a **majority** vote of the committee, provided the major professor votes with the majority.

(B) Doctoral Examinations

Same as (A) above except that if a re-examination is necessary, the candidate's overall proficiency will be determined by a **two-thirds** vote of the committee, provided that the major profesor votes to pass.

DOCTORAL PROGRAM

Each prospective candidate for the doctoral degree must demonstrate proficiency in French and in German during his period of residence for the Ph.D. Upon the recommendation of the major professor and the approval of the graduate committee, some other language may be substituted for either the French or the German. The first language must be completed before the start of the second year of graduate study, and the second language in the quarter before the general comprehensive examinations are taken. All doctoral students must have credit for History 504 and 506.

A minimum of 118 hours of course credit must be attained. The Department offers the Ph.D. in United States History and in European History Since 1815.

If a candidate should major in the field of American history, he must manifest proficiency within the department in either European History from 1789-1870 or European History from 1870-Present. He must also demonstrate proficiency in one of the following fields: Medieval, Latin American, British History 1485-1760 or British History 1760-Present, one of the European fields not selected above, or a specialized field such as Russian History with the consent of the major professor and the graduate committee. He is required also to develop an outside minor in one of the social sciences or humanities in which he will take sixteen (16) quarter hours of work.

If a candidate majors in the field of European History, he must major in the period of Europe Since 1815. He must demonstrate proficiency in either American History to 1865 or American History Since 1865. He is also required to demonstrate proficiency in one of the following fields: Medieval; Latin American; Britian, 1485-1760 or Britian, 1760-present, or a specialized field such as Russian History with the consent of the major professor and graduate committee. In addition, he must establish an outside minor of sixteen (16) quarter hours in any one of the fields of social sciences or humanities. The outside minor in either case should be decided after consultation with the candidate's major professor and his graduate committee.

The candidate's major professor and committee will review the candidate's progress and may require the candidate to stand a qualifying examination at the end of the first quarter. Upon the conclusion of all course work and the satisfactory completion of the language requirement, the candidate is expected to take a written and an oral general examination in the field of his major, his departmental minors, and his outside minor.

Major Fields:

U.S. History; European History, 1815 to Present.

Minor Fields:

U.S. History to 1865; U.S. History Since 1865;

Medieval; Britian, 1485-1760 or Britian 1760 to Present;

Europe 1789 to 1870; Europe 1870 to the Present;

Latin American, or a specialized field such as Russian History with the consent of the major professor and graduate committee.

Outside Minor:

One of the Social Sciences or Humanities.

Upon satisfactory completion of the general qualifying examination, the candidate shall be admitted by application to candidacy for the degree. If the candidate should fail the general comprehensive examination, he will be permitted to apply for a re-examination two quarters after such failure. A second failure of the general comprehensive examination will render the candidate ineligible for the Ph.D. in history at this institution.

The dissertation is expected to be a mature and competent piece of writing, embodying the results of significant and original research on a subject chosen by the candidate and approved by the major professor and the graduate committee.

Upon completion and approval of the dissertation, the candidate is expected to stand satisfactorily a final examination on the dissertation and the field in which the dissertation lies.

The student's major professor, who is usually selected in accordance with the preference of the student, will guide the candidate through the early part of his graduate work. Upon admission to candidacy for degree, an advisory committee will be appointed which will direct the work of the student through the completion of requirements for the degree. The committee will be composed of the major professor, who will be chairman, representatives from the student's major and minor fields, and as many other members of the graduate faculty as deemed necessary. The committee will in no circumstances exceed seven members and a two-thirds vote on all matters shall decide the candidate's fitness for the degree.

A minimum of three research seminars is required; two in the field of the major and one in the departmental minor.

COURSE DESCRIPTIONS (HIS)

Certain graduate courses taken in other departments may be accepted for credit with the consent of the student's graduate committee.

G-401—**Russia to 1800.** Four hours.

G-402—**Nineteenth Century Russia.** Four hours.

G-403—**Russia Since 1917.** Four hours.

G-404—**Russian Intellectual History.** Four hours.

G-411—**English Constitutional History.** Four hours.

G-413—**Western Intellectual History.** Four hours.

G-421—**Ancient Greece.** Four hours.

G-423—**The Roman Republic and Empire.** Four hours.

G-424—**Medieval World I, Economic and Social History.** Four hours.

G-425—**Medieval World II, Cultural History.** Four hours.

G-430—**Modern Germany.** Four hours.

G-432—**French Revolution and Napoleon.** Four hours.

G-433—**Europe, 1815-1870.** Four hours.

G-434—**Europe, 1870-1918.** Four hours.

G-435—**Europe, 1918-1939.** Four hours.

G-436—**Europe Since 1939.** Four hours.

G-437—**Modern France.** Four hours.

G-439—**Tudor-Stuart Britain.** Four hours.

G-441—**Nineteenth Century Britain.** Four hours.

G-442—**Twentieth Century Britain.** Four hours.

G-445—**The British Commonwealth.** Four hours.

G-451—**U.S. Intellectual and Social History to 1865.** Four hours.

G-453—**U.S. Intellectual and Social History Since 1865.** Four hours.

G-455—**The Old South.** Four hours.

G-457—**The New South.** Four hours.

G-458—**New Spain, 1519-1821.** Four hours.

G-459—**History of Mexico.** Four hours.

G-465—**The Spanish Borderland.** Four hours.

G-469—**United States Constitutional History to 1877.** Four hours.

G-470—**United States Constitutional History Since 1877.** Four hours.

G-475—**United States Foreign Relations to 1914.** Four hours.

G-477—**United States Foreign Relations Since 1914.** Four hours.

G-481—**Colonial America, 1607-1754.** Four hours.

G-482—**Revolutionary Era, 1754-1789.** Four hours.

G-484—**American Political Leaders.** Four hours.

G-495—**Age of Hamilton, Jefferson, and Jackson, 1789-1840.** Four hours.

G-496—**The Sectional Controversy and the Civil War, 1840-1865.** Four hours.

G-497—**Reconstruction and the Emergence of Modern America, 1865-1898.** Four hours.

G-498—**The Progressive Era, World War I, Prosperity and Depression. 1898-1933.** Four hours.

G-499—**The New Deal, World War II, and Post-War America, 1933-Present.** Four hours.

504—**European Historiography.** Four hours.

506—**American Historiography.** Four hours.

510—**Medieval History.** Four hours.

514, 515, 516—**Seminar in European History, 1870 to Present I, II, III.** Four hours each.

520—**Modern Russia.** Four hours.

531—**British History.** Four hours.

540, 541—**Reading Seminar in European History I, II.** Four hours each.

553—**Seminar in Southern History.** Four hours.

561—**Seminar in U.S. Diplomatic History.** Four hours.

572—**Seminar in American Colonial and Revolutionary Period.** Four hours.

574—**Seminar in Nineteenth Century U.S.** Four hours.

576—**Seminar in Twentieth Century U.S.** Four hours.

578, 579—**Reading Seminar in American History I, II.** Four hours each.

585—**Latin American History.** Four hours.

592—**Special Problems I, II, III, IV.** One hour each.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

791—**Research in History.** One to twelve hours.
Prerequisite: Approval of the major professor.

797—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF POLITICAL SCIENCE (PS)

William H. Hatcher, Chairman

Caudill	Dumas	Mobley	Robey
Smith	Tuchak	Virden	Wilber

The Master's Degree Program in Political Science

Master of Arts. Requirements for the Master of Arts degree include: forty-six (46) quarter hours of course work, which includes a thesis, and a sixteen-hour (16) hour minor (optional). A reading knowledge of one foreign language is also required.

Master of Science. Requirements for the Master of Science degree include: forty-six (46) quarter hours of course work, including an outside minor of sixteen (16) hours. A thesis is optional. The Master of Science degree should be considered a terminal degree.

Course Requirements in the Major. Graduate students who expect to receive the Master of Arts degree will select three fields in political science in which to concentrate their course work, Political Theory being one of the three. Graduate students who expect to receive the Master of Science degree will, in addition, select an outside minor, with the advice and consent of his committee.

The fields of political science and the courses in each field are:

Political Theory and Methodology
G-400, G-402, G-404, 500, 511, 512, 545

American Government and Politics
G-406, G-407, G-412, G-414, G-434, G-435, G-436, G-461, 532, 560

International Relations
G-453, G-454, G-457, G-458, G-470, G-472, G-474, G-482, G-483, G-485, 550, 555, 580

Comparative Government and Politics
G-450, G-451, G-452, G-470, G-472, G-474, G-480, 540, 580

Public Administration
G-460, G-462, G-463, G-464, G-481, 560, 561

Public Law
G-412, G-414, G-485, 520, 525

Comprehensive Examination. A written and oral comprehensive examination will be given at or near the end of the course work on the three fields of concentration and on the minor, if applicable.

Undergraduate Preparation. Before undertaking a graduate major in the Department of Political Science, a student should have at least twelve (12) hours of undergraduate political science. Additional work may be required at the discretion of the student's advisory committee.

Courses Accepted from Other Departments. The following courses will be accepted as political science for purposes of completing a major or minor if approved by the student's adviser:

FIN G-415; ECO G-400; HIS G-405, G-411, G-469, G-470, G-475, and G-477.

The Doctoral Program in Political Science

In addition to the general requirements listed above in this **Bulletin,** the Department of Political Science makes the following specific requirements.

Proficiency in **two** foreign languages is expected. The student must be able to use the first language before beginning doctoral work (the second year of graduate study), and must satisfy the requirement for the second language at least one full quarter prior to the quarter in which the comprehensive examination is taken. A dissertation based on scholarly research in original sources is required.

The qualifying examination (if required) is to be taken during the first quarter of graduate work beyond the master's degree.

Course Requirements in the Major. Doctoral candidates must specialize in four fields of political science and in one outside minor. (The fields and courses are listed under the master's program above.)

Comprehensive Examination. At the end of the course work, and following successful completion of the foreign language requirements, a written and oral comprehensive examination will be taken in the four fields of the major, and, at the student's doctoral committee's discretion, in the minor. Should the student fail the comprehensive examination in one or more fields, a re-examination may be given by the Department following a lapse of two quarters, or when the student has taken sufficient remedial work to warrant re-examination. Should the student fail the second examination, he will not normally be allowed to continue graduate work in the Department.

COURSE DESCRIPTIONS (PS)

G-400—**Political Theory to 1783.** Four hours.

Political thought from Plato through the Enlightenment, with emphasis on the contributions of individual philosophers.

G-402—**American Political Theory.** Four hours.

A study of the principal political ideas that have influenced the development of the United States' political system.

G-404—**Political Theory Since 1783.** Four hours.

Recent and contemporary European political thought with emphasis on liberalism, conservatism, socialism, communism, and fascism.

G-406—**American Political Parties and Pressure Groups.** Four hours.

A survey of party structures, problems, and the methods of political leaders. Also a survey of present pressure groups and their methods.

G-407—**Mississippi Government.** Four hours.

G-412—**U. S. Constitutional Law.** Four hours.

A survey, by the case method, of principles and practices of American constitutional law. Emphasis is placed upon judicial review, the federal system, national powers, and individual rights.

G-414—**The Judicial Process.** Four hours.

A study of the judicial system and its relationship to other elements of the political system and to society at large. Judicial functions and procedures are considered with special attention given to the inter-action between the courts and the legislative and executive branches. The focus of the course is on the national courts, but some attention is given to state courts.

G-434—**County Government.** Four hours.

A study of local rural government, with some emphasis on Mississippi.

G-435—**Municipal Government.** Four hours.

A study of the principal systems of municipal government in the United States, with emphasis on Mississippi.

G-436—**The Legislative Process.** Four hours.

A detailed study of Congress and the state legislature, covering functions, organization, procedure, outside influences, and problems. Emphasis is on Congress.

G-450—**Governments and Politics of Western Europe.** Four hours.

A study of West Germany, France, and Italy.

G-451—**Soviet Government and Politics.** Four hours.

A detailed study of the political, economic, and social structure of the Soviet Union, and of the role of the Communist Party.

G-452—**British Government and Politics.** Four hours.

G-453—**Soviet Foreign Policy.** Four hours.

A study of Soviet foreign policy with emphasis on the period after World War II.

G-454—**Politics of the World's Power Blocs.** Four hours.

Prerequisite: G-457 or permission of the instructor.

An intensive analysis of the pattern of politics resulting from the formation of the two major power blocs and the developing formation of lesser blocs such as that led by Communist China and the Neutralist bloc, the Common Market bloc, and the Japanese sphere.

G-457—**International Politics.** Four hours.

A survey of the international political process, explaining the principles, forces, actions, techniques, and the nature of the environment encountered in that process. This course also includes a brief analysis of methodology.

G-458—**International Organization.** Four hours.

A study of the principal types of international organization, and of examples of the same, such as the United Nations and the Organization of American States.

G-460—**Public Administration.** Four hours.

An introductory study, including administrative organization, personnel management, and fiscal management.

G-461—**The Presidency.** Four hours.

A study of the executive function in the process of government with special emphasis on the increasing role of the President.

G-462—**Public Personnel Administration.** Four hours.

Includes recruitment, promotion, discipline, control and the removal in both the United States and the states.

G-463—**Organization and Management.** Four hours.

Includes organization planning, program planning, fiscal planning, and administrative reporting.

G-464—**Policy Formulation.** Four hours.

Includes the roles of persons, groups, and governmental and non-governmental institutions.

G-470—**Middle Eastern Governments and Politics.** Four hours.

A study of the states of the contemporary Middle East: governmental structures and institutions, political organizations and behavior, and regional and international relations.

G-472—**Far Eastern Governments and Politics.** Four hours.

A survey of the politics and the governmental systems of the area in general, and of such states as India, China, Taiwan, Japan, Ceylon, and the Philippines in particular.

G-474—**Tropical African Governments and Politics.** Four hours.

A survey study of the political systems of the "emerging" states of the dark continent and the politics thereof, with special emphasis on industrialization and on socio-cultural background.

G-480—**Latin American Governments and Politics.** Four hours.

A study of governmental and political process in the Latin American member nations of the Organization of American States.

G-481—**Public Administration in Latin America.** Four hours.

A study of public administration in Latin America: strengths, weaknesses, underlying factors, and effect on pursuit of goals.

G-482—**Inter-American Politics.** Four hours.

A study of hemisphere relations, with emphasis on the United States and Latin America, bilaterally and multilaterally.

G-483—**Latin American Political Integration and Development.** Four hours.

A study of the theory of and progress toward Latin American political integration and development through agreements, organizations, and assistance programs.

G-485—**International Law.** Four hours.

A sampling of the field, based largely on cases.

500—**Scope and Methods.** Four hours.

A survey of the scope of political science and of the tools and methods utilized in the discipline.

511—**Seminar in Political Theory.** Four hours.

Prerequisite: Another course in political theory or consent of the instructor.

A research-type course in which each student will make an intensive study of one or more areas of political theory, or of one or more great writers on political theory.

512—**Problems in Political Theory.** Four hours.

Prerequisite: PS 511 or consent of the instructor.

A seminar devoted to a select number of central problems, which will vary from year to year.

520—**Seminar in U. S. Constitutional Law.** Four hours.

Prerequisite: Another course in constitutional law, a course in U. S. constitutional history, or consent of the instructor.

A research-type course in which each student will make an intensive study of one or more fields of U. S. Constitutional Law.

525—**Seminar in Public Law.** Four hours.

Prerequisite: A course in constitutional law or permission of the instructor.

A research course in which the students examine in depth various aspects of the judicial system and its relationship to other elements in the political process.

532—**Seminar in U. S. Government.** Four hours. May be taken twice for credit.

Prerequisite: Course in American national, state, and local government or consent of instructor.

An advanced course in the United States Government, including state and local levels.

540—**Seminar in Comparative Government and Politics.** Four hours. May be taken twice for credit.

Prerequisites: One or more courses in comparative government or consent of the instructor.

A research-type course in which each student will make an intensive study of the political institutions of one country, or of a group of countries having similar governments.

545—**Communist Ideology.** Four hours.

A critical study of materials from the basic writings of Communist thinkers: Marx, Lenin, Stalin, and Mao, with attention to modification made from period to period.

550—**Seminar in U. S. Foreign Relations.** Four hours.

Prerequisite: Another course in U. S. foreign policy or history of U. S. foreign policy or consent of the instructor.

A survey of current United States foreign policies and problems.

555—**Seminar in International Relations.** Four hours. May be taken twice for credit.

An intensive survey and analysis of the methodology, literature, and substance of the process of trans-state politics.

560—**Regulatory Commissions.** Four hours.

A study of the independent regulatory commissions in the context of separation of powers. The analysis will include the policies of the commissions, and the constitutionality of delegation of legislative power.

561—**The Administrative Process.** Four hours.

A study of the Bureaucracy as a part of American Government with

special emphasis on the role of the expert in modern administration. Restricted to old line Departments. Covers chain of command and the problem of control of administrative discretion.

580—**Seminar in Latin America.** Four hours.
Prerequisite: Two Latin American political science or history courses at the 400 level or consent of the instructor.
A research type course in which each student will make an intensive inquiry into a field such as those described in PS 480 to 483, or in Latin American nationalism—regionalism—hemisphereism, or in a special project.

591—**Research in Political Science.** One to twelve hours.

592—**Special Problems I, II, III.** One hour each.
The student works individually on a paper in political science under the supervision of a graduate faculty member.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

791—**Research in Political Science.** One to twelve hours.
Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF RELIGION (REL) AND PHILOSOPHY (PHI)

Forrest E. Wood, Acting Chairman

Atkinson Hales Jones Nau Parker Sullivan

The Department of Religion and Philosophy participates in programs leading to a Master of Arts degree in philosophy and a graduate minor in philosophy and/or a graduate minor in religion and philosophy.

The requirements for the Master of Arts degree in philosophy are as follows:

1. A minimum of forty-six (46) quarter hours of graduate work, twenty-four (24) quarter hours of which must be in courses numbered 500 or above, and six (6) quarter hours in a thesis.
2. Students whose undergraduate preparaton is adjudged inadequate may be required to make up their deficiences by taking undergraduate courses without credit. Specifically, students whose undergraduate program does not include the History of Philosophy and Elementary Logic will be required to enroll in those courses without receiving credit.
3. All students must pass a proficiency test in one foreign language, preferably modern; also Greek or Latin will be accepted.
4. A thesis and an oral defense of it are required.
5. Oral and written examinations, comprehensive and otherwise, may be required as determined by the chairman of the department and the student's advisory committee.

The requirements for the minor programs are as follows:

1. To complete a graduate minor in philosophy, a total of sixteen (16) quarter hours of graduate work is required.
2. To complete a graduate minor in religion and philosophy, a total of sixteen (16) quarter hours of graduate work is required with eight (8) quarter hours in each subject.

COURSE DESCRIPTIONS

PHILOSOPHY (PHI)

G-405—**German Idealism.** Four hours.

A critical study of modern German idealism from its origins in Kant through its development in Fichte, Schelling, and Hegel to late nineteenth and early twentieth century idealists.

G-412—**Philosophy of Politics.** Four hours.

A study of fundamental political concepts including law, government, sovereignty and state, and the relation of man's understanding of his own nature to the structuring of such concepts.

G-420—**Introduction to the Philosophy of Science.** Four hours.

Prerequisites: 8 hours of philosophy or advanced courses in mathematics or the empirical sciences.

A study of the conditions and status of knowledge, perception, measurement, hypothesis, causality, and concept formation based upon recent scientific and philosophical investigation.

G-430—**Advanced Ethics.** Four hours.

Prerequisite: PHI 370.

A study of rival contemporary theories in general theory of value and ethics. The positions of naturalism, intuitionism, emotivism, and functionalism will be critically compared.

G-442—**American Philosophy.** Four hours.

A consideration of representative modern American thinkers, including Royce, Peirce, James, Meade, and Dewey.

G-446—**Aesthetics.** Four hours

An analysis of classic philosophical problems and theories of art and beauty from Plato to the present.

G-448—**The Pre-Socratics.** Four hours.

A study of the major schools and problems of the pre-socratic philosophers from Thales to the atomists. Consideration will be given to the intrinsic importance of the contributions of these philosophers to perennial problems in metaphysics and epistemology as well as to the influence of these contributions on the philosophies of Plato and Aristotle.

G-454—**Introduction to Symbolic Logic.** Four hours.

The basic theory and operations of the sentential calculus, quantification, and the logic of relations.

G-460—**Analytic Philosophy.** Four hours.

A study of the historical background and development of the contemporary linguistic approach to philosophical problems based upon the writings of Wittgenstein, Wisdom, Ryle, and Austin.

G-462—**Phenomenology.** Four hours.

Texual study of the philosophy of Edmund Husserl, the founder of phenomenology. Topics such as philosophy as rigorous science, intentionality, and the phenomenological reduction will be given special attention.

520—**Seminar in Metaphysics.** Four hours.

Classical and contemporary metaphysics will be examined. Modern criticism by logicians, analytic philosophers, and philosophers of science will be presented.

524—**Seminar in Cosmology.** Four hours.
A study of philosophical and scientific world views.

525—**Seminar in Modern Philosophy.** Four hours.
A critical investigation of the writings of selected modern and contemporary philosophers.

530—**Seminar in Epistomology.** Four hours.
The problem of knowledge as presented in modern philosophic thought. Topics include the mind-body problem, the neural identity problem, behaviorism, etc.

550—**Plato.** Four hours.
A textual study of the major Platonic dialogues.

560—**Aristotle.** Four hours.
A textual study of Aristotle's philosophical writings.

570—**Kant.** Four hours.
A textual study of Kant's metaphysical, epistemological, and ethical writings.

590—**Special Problems.** Two to four hours.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

RELIGION (REL)

G-401—**History of Christian Culture.** Four hours.
May be elected as history.
A study of the cultural development of Western Europe during the Christian era, with emphasis on religious thought, and on religious aspects of institutions, literature, and art.

G-402—**Religion in the Rise of American Culture.** Four hours.
A study of the origin and development of the major religious groups and of the shifts in religious thought in the United States from colonial times to the present.

G-408—**History of the Christian Church I.** Four hours.
May be elected as history.
A study of the history of the church from the apostolic period through the Renaissance.

G-409—**History of the Christian Church II.** Four hours.
May be elected as history.
A study of the history of the church from the Reformation to the modern era.

G-425—**Studies in the Religious Dimensions of Secular Literature.** Four hours.
An examination of religious issues as expressed in modern plays and novels.

G-450—**Religious Literature and Thought of India.** Four hours.
A study of Hinduism, Buddhism, Jainism, and Sikhism as a part of the culture of India.

G-451—**Religious Literature and Thought of China and Japan.** Four hours.
A study of Confuscian, Taoist, Shinto, and Zen literature and thought.

G-452—**Religious Literature and Thought of Near East.** Four hours.
A study of Jewish, Zoroastrian, and Islamic literature and thought.

DEPARTMENT OF SOCIOLOGY (SOC)

John N. Burrus, Chairman

Allen Bourgeois Pearson

The Department of Sociology offers a graduate major and graduate minor on the master's degree level. The Department's graduate program provides for the Master of Arts degree in sociology and a sociology minor in the master's and doctor's degree programs of other departments.

General regulations governing admission to the Graduate School, requirements of the College of Arts and Sciences, and requirements for admission to candidacy for degree are to be found elsewhere in this **Bulletin.** The graduate student should familiarize himself with these requirements and assume responsibility for their discharge.

The major professor and departmental chairman will work out a program of study with, and for, each student electing to do graduate work in sociology.

If the student is uncertain as to whether he has satisfied undergraduate course prerequisites for any particular course, he should consult the instructor for clarification.

The Master of Arts Program in Sociology

In the major area, the Department of Sociology offers only the Master of Arts degree. General requirements correspond to the requirements of the University and its Graduate School. Policies of admission to the University, admission to the Graduate School, admission to candidacy for degree, and grading standards conform to those laid down by the University.

Requirements for the Master of Arts Degree

Thirty (30) quarter hours in sociology (minimum).

Sixteen (16) quarter hours in a minor subject approved by the Sociology Department.

At least half of the hours must be in courses numbered 500 or above.

Reading knowledge of one foreign language (proficiency as determined by Graduate School policy) .

A thesis to be approved by the major professor.

A written comprehensive examination.

An oral examination by the student's committee to be based on the thesis, the major, and the minor.

COURSE DESCRIPTIONS (SOC)

G-401—**Population.** Four hours.

A course in population analysis. An introduction to the Science of Demography. Instruction is given in how to compute and interpret vital data. Special attention is given to Mississippi population data.

G-420—**Industrial Sociology.** Four hours.

An advanced sociological study of industrial and business units as social systems in their institutional setting.

G-429—**Juvenile Delinquency.** Four hours.

A study of causes and the nature of juvenile delinquency, the development of the juvenile court, of probation and other rehabilitative programs.

G-430—**Social Foundations of Personality.** Four hours.

A comprehensive treatment of the role of the social group and the cultural heritage in the development and functioning of human personality.

G-450—**Social Institutions.** Four hours.

A detailed study of major American social institutions; their functions, interrelationships, and significant trends.

G-470—**Advanced General Sociology.** Four hours.

An advanced course in general sociology giving expanded treatment to the basic sociological concepts and subject matter areas. A basic course in a graduate program.

G-481—**History of Social Thought.** Four hours.

An introduction to social theory. A survey of man and ideas that have influenced the development of Western civilization.

G-482—**Sociological Theory.** Four hours.

A survey of the growth and development of sociological theory from Comte to the present.

G-485—**Methods of Social Research.** Four hours.

A survey of the basic techniques and methods essential to locating, processing, and presenting research materials.

Courses Exclusively for Graduate Students

501—**Departmental Seminar.** One hour.

May be repeated once for a total of two quarter hours. Required of all graduate majors.

507—**American Community Life.** Four hours.

A study of American community life and its social and cultural patterns.

509—**Seminar in Anthropology.** Four hours.

Individually designed and supervised studies in general anthropology. Seminar discussion on methodology and findings.

530—**Social Control and Social Change.** Four hours.

A study of the forms of social control. Independent research projects are reported to the class for discussion and evaluation.

550—**Social Institutions.** Four hours.

An advanced course in social institutions. A study of the structure and function of the five basic institutions. Each student will select one institution for intensive study.

570—**Seminar in Sociological Theory.** Four hours.

A detailed study of the content and influence of selected major contributors to sociological theory.

580—**Seminar in Demography.** Four hours.

Designed to develop understanding of data and trends in world and national population and to provide basis for assessing demographic implications of social and scientific change.

592—**Special Study Projects in Sociology I, II, III, IV.** Two hours each.

Special projects in reading, survey, or research in sociology. Work will be under direction of the major professor or a member of the graduate faculty. Work will be designed to earn credit in two hour units. Maximum credit is eight hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

Credit will not be recorded in 598 until thesis is accepted by the major professor.

DEPARTMENT OF SPEECH AND HEARING SCIENCES (SHS)

Robert B. Mahaffey, Chairman

Davis DuBard Harris Winger

The Department of Speech and Hearing Sciences participates in programs leading to the Master of Arts, Master of Science, Master of Education, and Doctor of Philosophy degrees. Part IV of this **Bulletin** covers the specific requirements for these degrees. At the master's level, specialization is possible in four principal areas: (1) Speech and Hearing Science, (2) Audiology, (3) Speech Pathology, and (4) Language Disorders. The program of study at the doctoral level will usually be planned with specialization in one of three principal areas: (1) Speech and Hearing Science, (2) Audiology, and (3) Speech Pathology.

COURSE DESCRIPTIONS (SHS)

SPEECH AND HEARING SCIENCES

G-402—**Language Development.** Four hours.

The normal acquisition of language.

G-406—**Acoustic Phonetics.** Four hours.

Principles of acoustic theories of speech production.

G-410—**Anatomy, Physiology, and Mechanism of Hearing.** Four hours.

This is a basic and fundamental audiology course open to all students who are interested in the normal anatomy and physiology of the ear and associated areas.

G-412—**Aural Rehabilitation.** Four hours.

Current methods involved in the rehabilitation of the hard of hearing, with emphasis on lipreading, auditory training, hearing aids, and counseling services.

G-440—**Medical Diagnosis and Treatment of Speech and Hearing Pathologies I.** Two hours.

G-441—**Medical Diagnosis and Treatment of Speech and Hearing Pathologies II** Two hours.

G-442—**Medical Diagnosis and Treatment of Speech and Hearing Pathologies III.** Two hours.

A three-course sequence dealing with the diagnosis and the medical and surgical treatment of speech and hearing pathologies.

G-443—**Voice Science I.** Four hours.

G-444—**Voice Science II.** Four hours.

A two-course sequence dealing with the various anatomical and neurological systems concerned with the production of speech.

500—**Designs in Research for Speech and Hearing.** Four hours.

Quantitative methods and logic models for scientific study of speech and hearing.

592—**Practicum in Speech and Hearing Science, Audiology, Language Disorders, or Speech Pathology.** Credit arranged.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598— **Thesis.** Six hours.

600—**Seminars in Speech and Hearing Science.** One to four hours each.

A. Acoustic Phonetics
B. Experimental Phonetics
C. Language Development
D. Physiological Mechanisms in Speech and Hearing
E. Psychoacoustics
F. Psychology of Speech
G. Quantitative Methods in Speech and Hearing
H. Semantics
I. Speech Encoding and Decoding
J. Speech Intelligibility

603—**Seminars in Laboratory Research.** One to four hours each.

A. Laboratory in Speech and Hearing Sciences
B. Laboratory in Audiology
C. Laboratory in Speech Pathology
D. Laboratory in Language Disorders

692—**Individual Study.** Credit arranged.

791—**Research in Speech and Hearing Sciences.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

AUDIOLOGY (AUD)

G-405—**Clinical Audiology I.** Four hours.

G-407—**Clinical Audiology II.** Four hours.

Prerequisite: SHS 302 or equivalent.

A two-course sequence dealing with advanced audiometric techniques and clinical procedures.

G-408—**Infant Audiometry.** Four hours.

Prerequisite: Consent of instructor.

A course designed to study the behavior, test procedures, and hearing responses of newborn and young infants.

Practicum required.

G-413—**Pre-School Hard of Hearing and Deaf.** Four hours.

An over-all view of the complex problems facing the hard-of-hearing and deaf child in the home, community, and educational environment.

G-417—**Audiological Instrumentation.** Four hours.

To present to advanced students various electronic systems employed in the study of audiology.

G-425—**Pathologies of the Hearing Mechanism.** Four hours.

A basic and fundamental course in audiology open to students interested in the various pathologies and abnormal functions of the ear and associated areas.

501—**Audiology.** Four hours.

The study of the body of knowledge pertaining to hearing.

602—**Seminars in Audiology.** One to four hours each.

A. Aural Rehabilitation
B. Differential Audiology
C. Electrophysiologic Audiometry
D. Industrial, Military, and Community Hearing Conservation
E. Measurement of Auditory Reception
F. Non-Organic Hearing Losses
G. Peripheral and Central Hearing Process

LANGUAGE DISORDERS

G-430—**Phonetics for the Acoustically Handicapped.** Four hours.

Techniques for teaching speech to the deaf and those children with unusual hearing problems, including system of orthography and their application for teaching speech and reading to acoustically handicapped children.

G-431—**Language Disorders I: Assessment of Children with Language Disorders.** Four hours.

Problems of assessing children with language disorders, differentiating the aphasic child from the deaf, mentally retarded, autistic, severely emotionally disturbed, or the child who does not develop speech and language because of muscular paralysis.

G-432—**Language Disorders II: Habilitation of the Aphasic Child.** Four hours.

Prerequisites: SHS 430, 431.

Basic problems of the aphasic child and procedures needed for him to acquire use and comprehension of language and speech.

G-433—**Language for the Hard-of-Hearing and Deaf.** Four hours.

Prerequisites: SHS 413 or the consent of the instructor.

Principles of language development for the pre-school and school age hard-of-hearing and deaf child and the child with multiple handicaps.

G-434—**Speech for the Hard-of-Hearing and Deaf.** Two hours.

Prerequisite: SHS 430.

Problems in developing and maintaining intelligible speech in hard-of-hearing and deaf children through the multisensory approach. Attention is given to the speech problems of children with multiple handicaps.

G-435—**Problems in Reading and Related Subjects for the Hard-of-Hearing and Deaf.** Four hours.

Prerequisite: Consent of the instructor.

Problems confronting the deaf in reading. Special attention is given to problems created by the vocabulary of high level abstraction and words of multiple meanings.

G-437—**History, Education, and Guidance for the Deaf.** Two hours.

604—**Seminars in Language Disorders.** One to four hours each.

A. Psychology of the Deaf and Speech Handicapped
B. Problems and Procedures in Evaluating Children.

SPEECH PATHOLOGY

G-301—**Introduction to Speech Pathology.** Four hours.

G-404—**Stuttering and Related Problems.** Four hours.

Theories and therapeutic procedures evaluated with respect to the problem of stuttering behavior in children and adults.

G-414—**Diagnostic Procedures in Speech Pathology.** Four hours.

Examination and diagnosis of people with speech disorders with emphasis on interviewing, testing, and report writing.

G-416—**Articulation Disorders.** Four hours.

Study of the problems of defective articulation: definition, causative factors, therapy, and research.

G-420—**Voice Disorders.** Four hours.

The disorders of voice and their cause and management.

G-424—**Organic Speech Problems.** Four hours.

The pathologies and therapies for speech and allied language problems associated with the organic disorders of cerebral palsy and cleft palate.

G-428—**Adult Aphasia and Related Problems.** Four hours.

The speech and related problems associated with neurological impairment.

G-438—**Pathology of Speech Mechanism.** Four hours.

Investigation of the various disorders involving the vocal mechanism which can result in and/or be associated with speech problems.

504—**Speech Pathology.** Four hours.

The study of the body of knowledge pertaining to speech pathology.

601—**Seminars in Speech Pathology.** One to four hours each.

A. Aphasia and Related Disorders
B. Articulation Disorders
C. Cerebral Palsy
D. Cleft Palate
E. Clinical Counseling in Speech Pathology
F. Neuropathologies of Speech
G. Stuttering and Related Problems
H. Voice Disorders

COLLEGE OF EDUCATION AND PSYCHOLOGY

Carlton L. McQuagge, Dean
L. Conrad Welker, Assistant Dean

Requirements for Admission to Graduate Programs

Admission to the Graduate School for study in the College of Education and Psychology requires a specific grade point average and a minimum GRE score. (See general admission requirements in Part III of this **Bulletin.**) Any individual who does not meet the general admission requirements may request additional consideration of his application by appealing to the appropriate department chairman. He may be admitted to a graduate program if he receives the approval of the department chairman, the Dean of the College of Education and Psychology, and the Dean of the Graduate School.

Anyone holding a bachelor's degree from an accredited institution may be admitted as a special graduate student. A special graduate student is not considered to be in a graduate program leading to a degree. If the student demonstrates proficiency in graduate work, he may make application for a graduate degree program and, if approved, the student may use up to sixteen (16) quarter hours of work taken as a special graduate student in the degree program.

Those applicants who wish to study for a master's degree in any area of professional public school work should study for the Master of Education degree, and, therefore, must first hold or qualify to hold a Class A teaching certificate based on a baccalaureate degree in the area in which they wish to concentrate. A Master of Education degree applicant who does not yet qualify for an A certificate may be admitted to the Graduate School, but must meet the requirements of the State of Mississippi for an A certificate in teaching before the degree will be awarded. However, upon the recommendation of the departmental chairman, the Dean of the College of Education and Psychology may waive the requirement of satisfying certification requirements for those students currently employed or preparing for employment in junior or senior colleges, non-public institutions, or positions not requiring certification. In the event that certification requirements are waived, it is incumbent upon the student to recognize this limitation upon the scope of the areas within which he might seek employment in the future.

Degree and Specialist Programs Offered

The College of Education and Psychology offers graduate programs at three levels: master's degree; specialist certificate; and doctor's degree.

Master's Degrees: Master's degrees are offered in the following departments, with majors as indicated:

Department of Administrative Personnel and Services
- Master of Education in
  - Educational Administration
  - Supervision of Instruction

Department of Business Education
- Master of Science
- Master of Education

Department of Curriculum and Instruction
- Master of Education in
  - Elementary Education
  - Early Childhood Education
  - Secondary Education
- Master of Science in
  - Reading
  - Secondary Education

Department of Guidance
- Master of Education in School Counseling
- Master of Science in
  - College Counseling
  - Community Counseling

Department of Health, Physical Education, and Recreation
- Master of Education in Health and Physical Education
- Master of Science in
  - Health
  - Recreation

Department of Industrial and Technical Education
- Master of Science

Department of Library Science
- Master of Arts
- Master of Science

Department of Psychology (Including Educational Psychology)
- Master of Arts
- Master of Science

Department of Science Education
- Master of Science

Department of Special Education
- Master of Education

Specialist Certificates: Specialist certificates are offered in the following departments, with majors as indicated:

Department of Administrative Personnel and Services
- General Administration
- Secondary School Administration
- Elementary School Administration
- Curriculum and Supervision

Department of Business Education
- Specialist Certificate in Business Education

Department of Curriculum and Instruction
- Specialist Certificate in Elementary Education
- Specialist Certificate with Emphasis in Reading
- Specialist Certificate in Secondary Education

Department of Guidance
- Specialist Certificate in School Counseling

Doctoral Degrees: The following departments offer the Doctor of Education and/or the Doctor of Philosophy degrees:

Department of Administrative Personnel and Services

Department of Curriculum and Instruction
- Elementary Education
- Secondary Education

Department of Guidance

Department of Health, Physical Education, and Recreation

Department of Psychology
- Psychology
- Clinical Psychology
- Educational Psychology
- Mental Retardation

DEPARTMENT OF ADMINISTRATIVE PERSONNEL AND SERVICES (AED) (RED)

James H. McPhail, Chairman

Anderson	Braun	Holden	Kazelskis
H. Knight	Lucas	McQuagge	Owings

The Department of Administrative Personnel and Services provides programs in educational administration and in educational research training.

The programs for the major in educational administration encompass the full range of administrative positions and lead to the master's degree, the specialist certificate, and the doctor's degree. Programs at the master's degree level provide preparation in the elementary school principalship, the junior high school principalship, the high school principalship, and supervision of instruction. Programs at the specialist certificate and doctorate levels provide preparation for the superintendency and central administrative staff positions. In addition, the program at the doctoral level provides preparation for college teachers of educational administration and persons desiring to prepare for administration in higher education.

The educational research training program consists of a structured graduate minor and advanced courses as electives in the student's major or minor field.

The following course patterns for the different levels set forth only the minimum core requirements, and the electives selected to suit individual needs and objectives must be chosen with the advice and approval of the student's major professor. Therefore, it is mandatory that the student consult early in his program, and frequently thereafter, with his major professor concerning the selection of courses and sequence in which these courses will be taken.

DEPARTMENTAL POLICIES

The following departmental policies are supplementary to the rules and regulations of the University and the Graduate School as set forth elsewhere in this **Bulletin.**

PROGRAMS AND COURSES IN EDUCATIONAL ADMINISTRATION (AED)

MASTER'S DEGREE

Admission

Regular: A minimum grade point average of 2.75 and a combined score of 750 on the aptitude phase of the Graduate Record Examination.

Conditional: By departmental action provided the student has a score of 750 or above on the aptitude section of the Graduate Record Examination and a grade point average no lower than 2.5 **or** a grade point average of 2.75 or above if the Graduate Record Examination score is below 750.

Application for Graduation Graduation is based upon:

1. Satisfactory completion of the English Proficiency Test.
2. Completion of an approved program of studies consisting of a minimum of forty-six (46) quarter hours.
3. Satisfactory completion of the comprehensive examination.

PROGRAMS

Educational Administration

RED 501—**Research: Its Introduction and Methodology.** Four hours. (Initial enrollment in the program must be in this course)
CIF 504—**Foundations in American Education.** Four hours.
CIF 507—**Basic Course in Curriculum Development.** Four hours.
EPY 510—**Advanced Educational Psychology.** Four hours.
AED 520—**Basic Course in Educational Administration.** Four hours.
AED 526—**Supervision of Instruction.** Four hours.*
AED 550—**School Business Management.** Four hours.*
AED 598—**Thesis.** Six hours. Credit deferred until thesis is completed.**

Total—28 or 34 hours.

Electives—12 or 18 hours. Included among the elective courses must be one of the following as approved by the student's adviser:

AED 513—**Organization and Administration of the Junior High School.** Four hours.*
AED 516—**Secondary School Administration.** Four hours.*
AED 518—**The Elementary School Principal.** Four hours.*

*Prerequisite: AED 520.

**Required only of students writing a thesis.

Supervision of Instruction

RED 501—**Research: Its Introduction and Methodology.** Four hours. (Initial enrollment in the program must be in this course.)
CIF 504—**Foundations in American Education.** Four hours.
CIF 507—**Basic Course in Curriculum Development.** Four hours.
EPY 510—**Advanced Educational Psychology.** Four hours.
AED 520—**Basic Course in Educational Administration.** Four hours.
AED 526—**Supervision of Instruction.** Four hours.*
AED 638—**Practicum in Supervision.** Four hours.* *
AED 598—**Thesis.** Six hours. Credit deferred until thesis is completed.* * *

Total—28 to 34 hours.

Electives—12 or 18 hours. These courses will be chosen from the fields of curriculum and instruction subject to the approval of the student's major professor.

*Prerequisite: AED 520

**Prerequisite: AED 526

***Required only of students writing a thesis.

SPECIALIST CERTIFICATE

Admission

Regular: A minimum grade point average of 3.25 on previous graduate work and a combined score of 800 on the aptitude phase of the Graduate Record Examination.

Conditional: A grade point average between 3.00 and 3.25 on previous graduate work and a Graduate Record Examination score no lower than 800 or a grade point average no lower than 3.25 and a Graduate Record Examination score between 750 and 800.

Admission to Candidacy

1. It is mandatory that the application for admission to candidacy be submitted upon the completion of twelve (12) to sixteen (16) quarter hours of course work at the University of Southern Mississipi.
2. Satisfactory completion of the English Proficiency Test.

Application for Graduation Graduation is based upon:

1. Completion of an approved program of studies as determined by the student's committee and which may consist of more than the minimum forty-eight (48) quarter hours of credit required for graduation.
2. Satisfactory completion of the comprehensive examination.
3. Successful defense of the research project.

PROGRAMS

The specialist certificate students must have completed all courses or their equivalent in the master's degree program. Those courses not taken must be completed but will not count as part of the specialist program. Additional electives are required for previously completed required courses.

A minimum of twelve (12) quarter hours in cognate areas is required in all of the specialist certificate programs. The Department defines cognate areas as those courses which broaden and complement the student's program which are outside the areas of professional education. These courses and other electives will be chosen with the approval of the student's major professor and additional hours may be required to satisfy deficiencies in the student's program.

Administration

AED 611, 636, 638, 668, 698, 700, 704, 706, 710
Total—36 hours.
Electives—12 hours in cognate areas.

Secondary Administration

AED 611, 638, 698, 704, 708, 710, 718
Total—28 hours.
Electives—20 hours with 12 in cognate areas.

Elementary Administration

AED 611, 638, 698, 704, 710 — RED 502 — CIF 718
Total—28 hours.
Electives—20 hours with 12 in cognate areas

Curriculum and Supervision*

AED 611, 638, 698, 708 — CIF 532, 718 — CIE 528 —
CIS 508 — EPY 580 or 610
Total—36 hours.

Electives—12 hours in cognate areas. AED 517 or CIF 519 is required as the first elective if any of the above courses have been completed prior to entering this program.

*It is understood that AED 520 and 526, CIF 507, and EPY 510 are required prerequisites to this program.

School Business Management*

AED 550, 668, 704, 706, 708, 710
Total—24 hours.

Electives—24 hours with 20 from business oriented courses. Suggested courses are MGT 525, G-472, G-468 — ACC G-470 — RED 612 — FIN 540 — BED G-460.

*FED 507, AED 520, and RED 501 are required prerequisites.

DOCTORAL DEGREE

Admission

Regular: A minimum grade point average of 3.50 or previous graduate work and a combined score of 900 on the aptitude phase of the Graduate Record Examination.

Conditional: A grade point average between 3.25 and 3.50 on previous graduate work and a Graduate Record Examination score no lower than 900 **or** a grade point average no lower than 3.50 and a Graduate Score Examination score between 800 and 900.

Qualifying Entrance Examination

1. Must be taken prior to the completion of twenty-four (24) quarter hours of study within the department.
2. May not be taken prior to the receipt of satisfactory GRE scores, the results of the Millers Analogies Test, and satisfactory completion of the English Proficiency Test.
3. Regularly admitted doctoral students who fail the examination may repeat it upon the completion of twenty-four (24) quarter hours of credit after the quarter in which the examination was taken.
4. The results of a master's degree comprehensive examination may not be substituted for this examination.

Planning Sheet: Planning sheets are completed after the qualifying examination has been passed and the committee appointed, but before the student has completed thirty-six (36) hours of course work.

Admission to Candidacy: Admission to candidacy should be submitted two quarters prior to graduation and will be approved by the student's graduate committee upon:

1. Completion of an approved program of studies.
2. Satisfaction of the language or statistics requirement.
3. Completion of an approved dissertation prospectus.
4. Completion of the Comprehensive Examination.
5. Completion of the residence requirement.

Application for Graduation: Graduation is based upon:

1. Meeting the departmental and Graduate School deadlines for receiving completed dissertation.
2. Successful defense of the completed dissertation.

PROGRAMS

At the doctoral level, programs are provided in (1) Public School Administration and (2) Educational Administration with an emphasis in Higher Education. The general administration program provides preparation for the superintendent, other central office positions, and college teachers while the program emphasizing higher education is designed to prepare administrators of higher education.

The doctoral program requires a minimum of 118 quarter hours beyond the bachelor's degree exclusive of the dissertation and proficiency in statistics. A minimum of forty-eight (48) quarter hours must be taken on the Hattiesburg campus. The student's doctoral committee, appointed by the Graduate Dean, will approve the selection of required courses and electives and in order to secure breadth and depth in the student's preparation program may require more than the minimum number of hours. The student's program shall include a minimum of twelve (12) quarter hours of graduate credit in cognate areas, preferably in the social sciences. The Department defines cognate areas as those courses which broaden and complement the student's program which are outside the areas of professional education.

Each doctoral student will be required to participate in a variety of laboratory and field experiences, many of which may not be connected with specific courses.

COURSE DESCRIPTIONS (AED)

513—**Organization and Administration of the Junior High School.** Four hours.

The philosophy, functions, and curriculum and their implementation in the organization and administration of the junior high school program.

516—**Secondary School Administration.** Four hours.

The practical problems encountered by high school principals: scheduling, calendar, attendance, discipline, office management, records and reports, activities, selection and supervision of staff; the principal's professional growth, and his relationship to the school, teachers, and patrons.

517—**Administration of Audio-Visual Communications Programs.** Four hours.

Prerequisite: Basic courses in the field or by permission.

Considers problems in management of an intergrated program, including production, selection, utilization, and administration of communications media; problems of finance; functions and organization of different services; relationship among school systems, college, and community groups; and evaluation standards for various services.

518—**The Elementary School Principal.** Four hours.

A study emphasizing the administrative problems faced by the principal. Considers practices in administration, supervision, school plant, supplies and equipment, attendance, curriculum, personnel, and parent-teacher cooperation. Stresses the professional leadership of the principal.

520—**Basic Course in Educational Administration.** Four hours.

A basic course designed for teachers and prospective school administrators. This course emphasizes school organization, business management, personnel, public relations, school policies, board policies, leadership, school construction, school plant maintenance, transportation, special services, and evaluation.

526—**Supervision of Instruction.** Four hours.

A practical course in supervision from the standpoint of the elementary, junior high, or high school principal and supervisor of instruction. Deals with principles and procedures of supervision.

542—**Supervision and Curriculum in Reading.** Four hours.

A study of organizational patterns in reading curricula and methods of improvement in reading instruction in schools from the point of view of the reading supervisor or consultant and the school administrator.

550—**School Business Management** Four hours.

A practical course in the over-all aspects of present day school business administration. The relationships of the educational program to the various business functions of a school district will be covered as well as the adaptation of current school financial accounting on a state and national basis for a local school system.

555—**Problems of the County Superintendent.** Four hours.

A course designed for county superintendents in which they study their problems under the direction of a graduate professor.

592—**Special Problems I, II, III.** One to three hours.

A problem study to develop knowledge and facility in a field of interest for the student which requires preparation of a scholarly paper under the supervision of a graduate professor. This registration must be approved by the departmental chairman upon the recommendation of the student's major professor.

594—**Field Problems in Production I and II.** Four hours each.

Opportunity to study local school problems of curriculum revision, course of study construction, evaluation of methods, building projects, community surveys, testing programs, and record systems under careful supervision of a graduate professor.

The project must be approved by the departmental chairman upon the recommendation of the student's major professor.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

611—**Advanced Curriculum Development.** Four hours.

This course is designed for the school administrator who has or will have responsibility for curriculum development in a school system. Areas covered are: modern elementary, junior high school, and senior high school curricula; the scope and sequence of curriculum patterns for a school system; correlation of elementary, junior high, and senior high curriculum and courses of study; in-service education of the instructional staff; and the utilization of community in curriculum development.

636—**Practicum in Educational Administration.** Four hours.
A study emphasizing problems connected with modern educational administration. Contemporary theories are related to the problems of administering the public schools from the standpoint of the superintendent and the central office staff.

638—**Practicum in Supervision.** Four hours.
This advanced course in supervision deals mainly with supervisory services provided from the central administrative office of the school district. A seminar approach is utilized in coordinating such services and individual problem solutions.

668—**Public School Finance.** Four hours.
Principles of taxation; local, state, and federal financing of public education; equalization of educational opportunity, budget making.

691—**Research in Educational Administration, Supervision, and Curriculum.** One to twelve hours.

692—**Special Problems.** Four hours.

697—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problem.** Four hours.
Selection of practical educational problems for solution by candidates for Education Specialist Certificate, using research and professional knowledge. A scholarly report is required.

700—**Advanced School Administration and Supervision.** Four hours.
This course deals with the theory and concepts underlying present day school administration and supervision.

704—**School Community Relations.** Four hours.
A study of public relations problems including reporting to parents and acquainting the community with the purposes, methods, accomplishments, and needs of the school.

706—**Administration of School Buildings and Grounds.** Four hours.
Designed for the local superintendent, treating the problem of housing, such as surveys, architect, finance, site, plans and specification, equipment, awarding contract, construction procedures, accepting, building and care of the grounds.

708—**Administration of School Personnel.** Four hours.
A course stressing the administrative relationships involved in developing satisfactory personnel policies, techniques, and regulations dealing with the pupil, the staff, and the public. The general principles of personnel management as they affect the pupil and staff, instructional and noninstructional, will be covered.

710—**School Law.** Four hours.
Legal aspects of such factors as school income, injury to pupils, keeping the school census, enforcing attendance, teaching certain subjects, and related matter.

711—**Higher Education in the United States.** Four hours.

This course provides an overview of the development, scope, philosophy, objectives, and recent innovations in colleges and universities.

712—**The Junior College.** Four hours.

This course treats the development, functions, programs, philosophy, issues, and research related to the junior college.

713—**Curricula in Higher Education.** Four hours.

This course is concerned with curricula offered in the junior and senior college with particular attention to problems and issues in general education, technical education, professional education, and graduate education. Innovation and research in instruction will also be considered.

714—**Organization and Administration of Higher Education.** Four hours.

This course is designed to: examine typical organizational patterns of colleges and universities; develop an understanding of the basic functions of governing and coordinating boards and of officials involved in college and university administration; and develop an understanding of principal problems faced in the administration of institutions of higher learning.

790—**Administrative Workshop I, II, III, IV, and V.** One and one-half hours per week. (Course may be repeated, with only nine hours counting toward a degree.)

791—**Research in Educational Administration, Supervision, and Curriculum.** One to twelve hours.

Prerequisite: Approval of the major professor.

794—**Field Problems in Administration I, II, III.** One hour each.

A project dealing with a specific problem in school administration. An on-the-job training program with the work being done under the supervision of a graduate professor. This registration must be approved by the departmental chairman upon the recommendation of the student's major professor.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

EDUCATIONAL RESEARCH TRAINING (RED)

Harold V. Knight, Coordinator

The program in educational research offers the student two options:

1. A structured minor in educational research at the doctoral level.
2. A choice of a number of advanced research courses as additional course electives in the student's major or minor field.

MINOR

The structured minor in educational research at the doctoral level provides for maximum flexibility in meeting the unique needs for research training in the departmental major fields. A total of sixteen (16) hours **plus** RED 552 and 553 constitute the minimum requirements.

The required courses should be viewed as a minimum basis for training in educational research and are designed to prepare the student for more advanced study. Additional advanced courses offered in educational research are recommended for qualified students. Students desiring emphasis in psychology orientation may substitute equivalent statistics and design courses offered in the area of psychology. Such substitutions must be approved by both departments.

Curriculum Requirements*

CSS G-412—**Educational Statistics.** Four hours.
or
RED 612—**Computer Applications in Educational Research.** Four hours.

RED 552—**Advanced Correlational Methods.** Four hours.

RED 553—**Significance Tests and Design.** Four hours.

RED 624—**Research Design in Educational Research.** Four hours.

RED 630—**Multivariate Analysis.** Four hours.

RED 796—**Advanced Educational Research.** Four hours.

Total—24 hours.

*Prerequisites: (1) Basic courses consisting of RED 501, 502, and CIF 532 are recommended. (2) A grade point average of 3.0 in RED 552 and 553 is required.

Suggested Educational Research Electives

CSS G-412—**Educational Statistics.** Four hours.

RED 618—**Practicum in Educational Research.** Four hours.

RED 624—**Design in Educational Research.** Four hours.

RED 694—**Special Problems I, II, III.** One hour each.

RED 691—**Field Problems in Educational Research.** One-twelve hours.

COURSE DESCRIPTIONS (RED)

501—**Research: Its Introduction and Methodology.** Four hours.
Methods of scientific inquiry, selection of a research topic, principles of reporting research, and functional statistical concepts.

502—**Introduction to Educational Statistics.** Four hours.
Basic concepts and computations in description statistics. Introduction to sampling procedures and inferential processes in education research.

552—**Educational Research: Correlational Statistical Methods.** Four hours.

Prerequisite: RED 502 or permission of instructor.

A brief review of elementary statistics and normal curve functions. Correlation theory and application to educational data. Concepts and computations associated with bivariate, partial, and multiple correlation.

553—**Educational Research: Significance Tests and Statistical Methods for Experimental Design.** Four hours.

Prerequisite: RED 552

Probability theory and theoretical distributions in experimental design: binomial, normal curve, **t** ratio, chi square, and **F** ratio. Concepts and computations associated with the use of these distributions in making probability decisions in research, including **t** tests, simple analysis of variance, and complex analysis of variance through 3-way design.

612—**Computer Applications in Educational Research.** Four hours.

Prerequisites: RED 552, 553. (Recommended)

Skills development course in the computer analysis of behavioral science data and orientation toward the systems approach, communication procedures, and computer utilization in financial, pupil, and personnel accounting procedures. Practical applications will be emphasized.

618—**Practicum in Educational Research: Writing and Dissemination.** Four hours.

Prerequisites: RED 552, 553. (Recommended)

Overview of types of current research related to education, primarily in student's major field. Experience in application of appropriate research models, writing behavioral objectives, structure of research reports, critique of published research problems, presentation and analysis of student's proposed research problem.

6220—**Measurement in Educational Research.** Four hours.

Prerequisites: RED 552, 553.

A survey of the theory of measurement including true score theory, reliability, validity, theoretical and applied item analysis and item selection techniques. Examination of measuring instruments applicable to research in the educational setting.

624—**Research Design in Educational Research.** Four hours.

Prerequisites: RED 552, 553.

Study of experimental and quasi-experimental designs in educational research and appropriate statistical treatment and interpretation. Emphasis upon sources of invalidity and utilization of design principle and statistical controls in educational research applications.

630—**Multivariate Analysis in Educational Research.** Four hours.

Prerequisites: RED 552, 553

Theory and application of multiple regression analysis, multiple and connical correlation, multiple discriminant analysis, factor analysis, and advanced Anova techniques to data in educational research. Emphasis upon principles of application and interpretation.

691—**Field Problems in Educational Research.** One to twelve hours.

Prerequisite: Approval of major professor and Educational Research Staff.

694—**Special Problems in Educational Research I, II, III.** One hour each.

Prerequisite: Approval of major professor and Educational Research Staff.

A problem study involving specific research procedures applicable to development of skills in different types of research within a field of interest. The preparation of a scholarly paper is required.

698—**Research Problem.** Four hours.

Selection and development of a practical educational research problem for the Education Specialist Certificate. A scholarly research report is required.

796—**Advanced Educational Research.** Four hours.

A seminar in problems related to philosophy of scientific method as applied to educational research, types of educational research, methods of observation and data collection, methods of quantifying a research data base, and methods of design, measurement, analysis, interpretation, and reporting of educational research.

DEPARTMENT OF BUSINESS EDUCATION (BED)

Annelle Bonner, Chairman

Baldwin Bishop Frink R. Taylor

The Department of Business Education offers programs of study leading to the Master of Science degree in business education, the Master of Education degree in business education, Certification in cooperative office education, and an Education Specialist Certificate in business education. Persons who plan to teach business subjects in junior and senior colleges, who desire Class AA certification in secondary education, who desire certification in cooperative office education, or who desire additional training for employment in the business world can find a program suited to their professionl goals.

A person pursuing any one of these programs should have completed an undergraduate major in business teacher education. Candidates not having completed this major must become eligible for Class A certification as a business teacher as a prerequisite to the completion of all requirements for the first three programs listed. To be eligible for admission to the Education Specialist Certificate program, a person must present evidence of satisfactory scholarship in undergraduate and graduate study, hold a master's degree with a major in business education, have a well-defined professional goal, and meet other admission requirements of the University.

The appropriate master's degree will be conferred upon candidates who (1) meet the general requirements of the Graduate School and of the Department of Curriculum and Instruction; (2) complete the special curriculum requirements outlined below; and (3) pass an oral examination. In addition a comprehensive written examination covering course content may be required by the Department of Business Education. A thesis is optional.

The Education Specialist Certificate will be conferred upon candidates who satisfactorily complete items (1) and (2) in the preceding paragraph, (3) pass oral and written examinations, and (4) complete a research problem.

MASTER OF SCIENCE DEGREE PROGRAM

Curriculum Requirements

	Hours
FIN 540—American Financial Institutions	4
FIN 585—Business History	4
*Electives in School of Business Administration	16
RED 501—Research: Its Introduction and Methodology	4
CIF 504—Foundations in American Education	4
BED 551—Principles of Business Education	4
BED 552—Seminar in Business Education	4
Electives or thesis	6
	46

MASTER OF EDUCATION DEGREE PROGRAM

Curriculum Requirements

	Hours
EDUCATION: 12 quarter hours	
RED 501—Research: Its Introduction and Methodology	4
CIF 504—Foundations in American Education	4
EPY 510—Advanced Educational Psychology	4
BUSINESS ADMINISTRATION: 12 quarter hours	
ECO G-470—Comparative Economic Systems	4
MGT 525—Human Relations in Business	4
FIN 585—Business History	4

BUSINESS EDUCATION: 22 quarter hours

BED 508—Curriculums in Business Education	4
BED 551—Principles of Business Education	4
BED 552—Seminar in Business Education	4
BED 569—Measurement and Evaluation in Business Education	4
Electives or thesis	6
	46

*Electives are to be chosen in consultation with the chairman of the department.

It is recommended that RED 501, the research course, be taken early in each program.

CURRICULUM FOR COORDINATORS OF BUSINESS AND OFFICE EDUCATION PROGRAMS

Persons who hold a Bachelor of Science degree with a major in business teacher education may take the three courses listed below and become certified as coordinators of business and office education programs.

	Hours
BED G-452—Philosophy of Vocational Business Education	4
BED G-453—Coordination of Office Occupations Programs	4
BED 591—Problems in Cooperative Office Education	2

EDUCATION SPECIALIST CERTIFICATE

Curriculum Requirements

As part of the requirements for the Specialist Certificate with a major in business education, a student must maintain satisfactory scholarship in completing the following course work:

1. **Required courses in basic education or equivalent**	20 hours
Select five:	
a. RED 501—Research: Its Introduction and Methodology	4 hours
b. CIF 504—Foundations in American Education	4 hours
c. GED 506—Foundations in Guidance	4 hours
d. CIF 507—Basic Course in Curriculum Development	4 hours
e. EPY 510—Educational Psychology	4 hours
f. CIF 532—Measuring Results in Education	4 hours
2. **Area Major** (specialization in business education)	28 hours
a. BED 504—Foundations in Business Education	4 hours
b. BED 551—Principles of Business Education	4 hours
c. Select two:	
BED 553—Improvement of Instruction in Bookkeeping and Related Basic Skills	4 hours
BED 555—Improvement of Instruction in Typewriting and Related Skills	4 hours
BED 556—Improvement of Instruction in Shorthand and Transcription	4 hours
d. BED 601—Seminar in Business Education	4 hours
e. BED 660—Administration and Supervision in Business Education	4 hours
f. BED 698—Research Problem	4 hours

3. **Related Field** 20 hours.
The related field selected should both complement and supplement the major area in rounding out the preparation for one of the career goals of the specialist program, i. e., (a) advanced technical education for business; (b) teacher education; or (c) administration and supervision. Course credits earned in the basic courses in education are not applicable to the related field.

With the approval of the candidate's advisory committee, a related field may be selected from one of the following: (a) school administration; (b) guidance; (c) educational psychology; (d) vocational education; (e) techniques (research, statistics, and tests and measurements); (f) secondary education.

Also with the approval of the candidate's advisory committee, a combination of courses selected primarily from the foregoing fields may constitute a related field provided such selection contributes directly to the career goal of the candidate.

4. **Outside minor** - field other than education 16 hours.
A candidate pursuing the Education Specialist Certificate with a major in business education pursues an outside minor in business administration and/or economics.

5. **Elective courses** (ten (10) quarter hours provided minimum hours are taken in the basic, major, related, and minor areas) 0-10 hours.
Electives should be selected with approval of adviser to strengthen the candidate's preparation for his chosen career goal.

Scholarship and Examinations

In addition to achieving acceptable scores on admission examinations and maintaining satisfactory scholarship throughout the course work, a candidate will be required to achieve satisfactorily in both written and oral comprehensive examinations in business education.

Completion of Work for Certificate

A candidate must complete the requirements for the Specialist Certificate within six years from the date of admission to candidacy.

COURSE DESCRIPTIONS (BED)

G-452—**Philosophy of Vocational Business Education.** Four hours.

History of vocational business education; changing concepts resulting from Federal legislation; changing nature of office systems and occupations; changing employment opportunities and consequent changes in procedures and techniques of vocational business education.

G-453—**Coordination of Office Occupations Programs.** Four hours.

Problems of the coordinator in the development of programs to meet the needs of employed youth and adults in office occupations programs.

G-460—**Office Management.** Four hours.

A study of the principles of management as applied to office work, covering office organization, supervision, layout, supplies, machines, personnel, office forms and reports, and office services.

504—**Foundations in Business Education.** Four hours.

Examination and analysis of the history and philosophy of business education.

508—**Curriculums in Business Education.** Four hours.

Curriculum construction; content organization; selection and preparation of instructional materials; and application of instructional techniques.

551—**Principles of Business Education.** Four hours.

Principles and objectives of business education in junior high school, high school, and junior college and other post high school institutions; guidance; qualifications and professional activities of the business teacher; and public relations with business.

552—**Seminar in Business Education.** Four hours.

An intensive study of specific problems in business education, and a survey of literature pertaining to the problems.

553—**Improvement of Instruction in Bookkeeping and Related Basic Skills.** Four hours.

Problems and procedures in the mastery of bookkeeping and related knowledges and skills; materials and teaching procedures in bookkeeping and business mathematics; teaching problems emphasized; significant research relating to methodology and testing examined.

555—**Improvement of Instruction in Typewriting and Related Skills.** Four hours.

Teaching procedures basic to vocational proficiency in typewriting and related skills; available instructional materials; measurement of skills; standards of achievement; teaching problems of students in class; review of related research.

556—**Improvement of Instruction in Shorthand and Transcription.** Four hours.

Problems in the development of occupational proficiency in shorthand; available instructional materials; transcription problems; integration of shorthand, typewriting, English, and style; achievement tests; standards of achievement. Special attention to teaching problems of students in the class. Evaluation of related literature and research.

569—**Measurement and Evaluation in Business Education.** Four hours.

Concept of evaluation; tools of evaluation; evaluation in the different business subjects; construction of tests; selection, administration, and scoring of tests; determination of grades; evaluation on the job (National Business Entrance Tests, Civil Service, et cetera).

591—**Problems in Cooperative Office Education.** Two hours.

Analysis of problems in administering cooperative office education programs.

592—**Special Problems I, II, III.** One hour each.

Prerequisite: 12 quarter hours of advanced courses in business education.

A problem study to be approved by the department chairman to develop knowledge and facility in a field of interest of the student. Preparation of a scholarly paper is required.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit is deferred until thesis is completed.

601—**Seminar in Business Education.** Four hours.

Analysis and evaluation of significant research studies in the field of business education.

660—**Administration and Supervision of Business Education.** Four hours.

Study of the principles, agencies, and general techniques of effective administration and supervision of business education in junior high, senior high, and evening high schools, and in colleges.

691—**Research in Business Education.** One to twelve hours.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problem.** Four hours.

DEPARTMENT OF CURRICULUM AND INSTRUCTION

E. M. Gunn, Chairman

P. W. Peddicord, Co-Chairman Graduate Teacher Education

L. C. Welker, Co-Chairman Undergraduate Teacher Education

Brevard Campbell Cunningham B. Davis Easterling Friedman
D. Knight S. Knight Landskov Miller Phillips Posey Rogers
Umholtz Wall Warren

The Department of Curriculum and Instruction includes the areas of elementary education, early childhood education, reading, secondary education, and educational foundations. Although degrees are not offered in the area of educational foundations, the Department of Curriculum and Instruction offers degree programs at the master's, specialist, and doctoral levels in the other areas. The following degrees are offered in these areas:

Master of Education in Elementary Education

Master of Education in Early Childhood Education

Master of Science in Reading

Master of Education and Master of Science in Secondary Education

Specialist Certificate in Elementary Education

Specialist Certificate in Elementary Education with Emphasis in Early Childhood Education

Specialist Certificate in Elementary Education with Emphasis in Reading

Specialist Certificate in Secondary Education

Doctor of Education and Doctor of Philosophy in Elementary Education

Doctor of Education and Doctor of Philosophy in Elementary Education with Emphasis in Early Childhood Education

Doctor of Education and Doctor of Philosophy in Elementary Education with Emphasis in Reading

Doctor of Education and Doctor of Philosophy in Seconadary Education

Only candidates holding a Class A certificate, or who exhibit willingness to meet Class A certification requirements at the undergraduate level prior to completion of a graduate degree program, will be admitted to the Department of Curriculum and Instruction. However, upon the recommendation of the departmental chairman, the certification requirement may be waived for a student pursuing a graduate degree in the area of secondary education who is currently employed or preparing for employment in a junior or senior college, non-public institution, or for a position not requiring certification. In the event the certification requirement is waived, it is incumbent upon the student to recognize this limitation upon the scope of the areas within which he might seek employment in the future.

No student will be eligible to receive a master's degree or a specialist certificate until he has completed at least one year of teaching experience. Three years of teaching experience is a requisite for a doctor's degree.

MASTER'S DEGREES

The Department of Curriculum and Instruction offers master's degrees in elementary education, early childhood education, reading, and secondary education.

The program of study at the master's degree level is designed to increase the professional competency of the classroom teacher and to provide the course work necessary to meet standards of teacher certification at this advanced level.

The master's program requires regular admittance procedures, appointment of a graduate adviser, the filing of an approved program of studies, satisfactory completion of the English Proficiency Test, and successful completion of the comprehensive examination.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a master's degree program, an applicant must have a grade point average of at least 2.75 (figured on an A equals 4.0 scale) for the last two years of undergraduate study and at least 3.0 on undergraduate courses in the area of proposed graduate study. In addition, the applicant must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examination.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a master's degree program on a conditional basis in one of two ways.

1. He must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examination and must have a grade point average no lower than 2.5.

2. He must have a grade point average of at least 2.75 if he has scored lower than 750 on the aptitude sections of the Graduate Record Examination.

DEGREE PROGRAMS

Master of Education Degree in Elementary Education

RED 501—Research: Its Introduction and Methodology. Four hours.
CIF 504—Foundations in American Education. Four hours.
CIE 506—Psychology of Reading. Four hours.
or
CIE 529—Reading in the Elementary School. Four hours.
AED 520—Basic Course in Educational Administration. Four hours.
CIE 528—Curriculum Problems in the Elementary School. Four hours.
CIF 532—Measuring Results in Education. Four hours.
EPY 574—Advanced Child Psychology. Four hours.
CIE 598—Thesis. Optional. Credit deferred until thesis is completed. Six hours.

In addition to the above required core courses, at least three courses (12 hours) must be chosen from the following:

SCE 510—Physics for Elementary School Teachers. Four hours.
SCE 511—Chemistry for Elementary School Teachers. Four hours.
SCE 512—Biology for Elementary School Teachers. Four hours.
SCE 513—Earth Sciences for Elementary School Teachers. Four hours.
CIE 524—Problems of Teaching Arithmetic. Four hours.
CIE 525—Social Studies Education in Elementary School. Four hours.
CIF 560—Economic Education for Teachers. Four hours.

Total Hours—40 non-thesis program; 46 thesis program
Free Electives—8 hours non-thesis program

Master of Education Degree in Early Childhood Education

RED 501—Research: Its Introduction and Methodology. Four hours.
CIF 504—Foundations in American Education. Four hours.
CIE 570—Practicum in Early Childhood Education. Four hours.
CIE 572—Practicum with Parents. Four hours.
CIE 577—Evaluation in Early Childhood Education. Four hours.
CIE 578—Creative and Mental Growth. Four hours.
CIE 576—Seminar in Early Childhood Education. Four hours.
or
CIE 580—Research in Child Development. Four hours.
CIE 598—Thesis. Optional. Credit deferred until thesis is completed. Six hours.

In addition to the above required core courses, at least two courses (8 hours) must be chosen from the following:

CIE 506—Psychology of Reading. Four hours.
or
CIE 529—Reading in the Elementary School Four hours
CIE 528—Curriculum Problems in the Elementary School. Four hours.
EPY 574—Advanced Child Psychology. Four hours.

Total Hours—36 non-thesis program; 42 thesis program
Free Electives—12 hours non-thesis program; 4 hours thesis program

Master of Science Degree in Reading

RED 501—Research: Its Introduction and Methodology. Four hours.
CIF 504—Foundations in American Education. Four hours.
EPY 510—Advanced Educational Psychology. Four hours.
or
EPY 574—Advanced Child Psychology. Four hours.
or
EPY 575—Advanced Adolescent Psychology. Four hours.
CIE 506—Psychology of Reading. Four hours.
CIE 529—Reading in the Elementary School. Four hours.
CIS 554—Reading in the Secondary School. Four hours.
CIE 513—Advanced Diagnosis and Remediation of Reading Disability for the Classroom Teacher. Four hours.
CIE 533—Practicum in Diagnosis and Remediation of Reading Disability for the Classroom Teacher. Four hours.
SPE G-455—Speech and Hearing Problems for the Classrom Teacher. Four hours.
AED 526—Supervision of Instruction. Four hours.
CIE 598—Thesis. Optional. Credit deferred until thesis is completed. Six hours.

Total Hours—40 non-thesis program; 46 thesis program

Free Electives—8 hours non-thesis program

Master of Education Degree and

Master of Science Degree in Secondary Education

Plan I (Thesis Program—46 Hours)

RED 501—Research: Its Introduction and Methodology. Four hours.
CIF 504—Foundations in American Education. Four hours.
EPY 510—Advanced Educational Psychology. Four hours.
GED 506—Fundamentals of Guidance. Four hours.
or
CIS 508—High School Curriculum. Four hours.
or
CIF 532—Measuring Results in Education. Four hours.
CIS 598—Thesis. Credit deferred until thesis is completed. Six hours.

Plan II (Non-thesis Program—48 Hours)

RED 501—Research: Its Introduction and Methodology. Four hours.
CIF 504—Foundations in American Education. Four hours.
GED 506—Fundamentals of Guidance. Four hours.
CIS 508—High School Curriculum. Four hours.
EPY 510—Advanced Educational Psychology. Four hours.
CIF 532—Measuring Results in Education. Four hours.

In addition to the above twenty-two (22) hour core requirement for Plan I and the twenty-four (24) hour core requirement for Plan II, a minor of at least twenty-four (24) hours must be taken in one of the following subject areas:

Art
Biology
Chemistry
Physics
English
Foreign Languages
Music
Communication
Theatre
Geology
Technical and Industrial Education
*Mathematics
**Science
***Social Studies

*Courses in computer science and statistics may be included in this area.

**A combination of science courses may be used if the adviser determines that the need exists.

***Courses may be taken in any one or a combination of the following areas: history, geography, political science, sociology, and economics.

Under certain conditions, other minors may be selected with the approval of the department chairman.

SPECIALIST CERTIFICATES

The Department of Curriculum and Instruction offers specialist certificates in elementary education, secondary education, elementary education with emphasis in reading, and elementary education with emphasis in early childhood education. As a sixth year program, the specialist program requires regular admittance procedures, appointment of a graduate adviser and committee, filing an approved program of studies, satisfactory completion of the English Proficiency Test, and completion of an approved field study.

Course work within the specialist programs includes the requirements outlined under the master's degree programs in addition to the requirements specified in this section.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a specialist program, an applicant must have a grade point average no lower than 3.25 on previous graduate work and a combined score of at least 800 on the aptitude sections of the Graduate Record Examination.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a specialist program on a conditional basis in one of two ways.

1. He must make a combined score of at least 800 on the aptitude sections of the Graduate Record Examination and must have a grade point average no lower than 3.00 on previous graduate work.
2. He must have a grade point average no lower than 3.25 on previous graduate work and must make a combined score of at least 750 on the aptitude sections of the Graduate Record Examination.

Specialist Certificate in Elementary Education

RED 502—Introduction to Educational Statistics. Four hours.
CIF 716—History of Public Education in the United States. Four hours.
CIF 718—Comparative Philosophies of Education. Four hours.
AED 526—Supervision of Instruction. Four hours.
EPY 503—Learning and Motivation I. Four hours.
or
EPY 510—Advanced Educational Psychology. Four hours.
CIE 698—Research Problem. Four hours.

Total Hours—24

In addition to the above required core courses, at least four courses (16 hours) must be taken in a subject field or fields.

Total Required Hours—40 minimum
Electives—8 hours

Specialist Certificate in Elementary Education With Emphasis in Early Childhood Education

RED 502—Introduction to Educational Statistics. Four hours.

CIF 716—History of Public Education in the United States. Four hours.

CIF 718—Comparative Philosophies of Education. Four hours.

AED 526—Supervision of Instruction. Four hours.

EPY 503—Learning and Motivation I. Four hours.

or

EPY 510—Advanced Educational Psychology. Four hours.

CIE 698—Research Problem. Four hours.

Total Hours—24

In addition to the above required core courses, at least four courses (16 hours) will be taken in the area of early childhood education.

Total Required Hours—40 minimum

Electives—8 hours

Specialist Certificate in Elementary Eductaion with Emphasis in Reading

RED 502—Introduction to Educational Statistics. Four hours.

CIF 716—History of Public Education in the United States. Four hours.

CIF 718—Comparative Philosophies of Education. Four hours.

AED 526—Supervision of Instruction. Four hours.

EPY 503—Learning and Motivation I. Four hours.

or

EPY 510—Advanced Educational Psychology. Four hours.

CIE 698—Research Problem. Four hours.

Total Hours—24

In addition to the above required core courses, at least four courses (16 hours) will be taken in the area of reading.

Total Required Hours—40 minimum

Electives—8 hours

Specialist Certificate in Secondary Education

RED 502—Introduction to Educational Statistics. Four hours.

CIF 716—History of Public Education in the United States. Four hours.

CIF 718—Comparative Philosophies of Education. Four hours.

EPY 575—Advanced Adolescent Psychology. Four hours.

AED 704—School Community Relations. Four hours.

or

AED 526—Supervision of Instruction. Four hours.

CIS 698—Research Problem. Four hours.

In addition to the above twenty-four (24) hour core requirement, a minor of at least twenty-four (24) hours must be taken in one of the subject areas listed under the heading **Master of Education Degree and Master of Science Degree in Secondary Education.**

Total Required Hours—48 minimum

DOCTORAL DEGREES

The Department of Curriculum and Instruction offers doctoral degrees in elementary education, secondary education, elementary education with emphasis in reading, and elementary education with emphasis in early childhood education.

There are three distinct phases through which all students proceed in pursuit of the doctoral program. These include:

1. Phase One—involvement in procedures relative to general admittance requirements; appointment of a major professor; successful completion of the Miller Analogies, English Proficiency, and qualifying examinations; and appointment of the candidate's doctoral committee.
2. Phase Two—involvement in procedures relative to tentative program of studies, acceptance of prospectus, successful completion of the language and/or statistics requirements, completion of the residency and course work requirements, successful completion of the comprehensive examination, and admission to candidacy for a doctoral degree.
3. Phase Three—involvement in procedures relative to approval of dissertation.

ADMISSION REQUIREMENTS

In order to be admitted on a regular basis to a doctoral program, an applicant must have a grade point average no lower than 3.5 on previous graduate work and a combined score of at least 900 on the aptitude sections of the Graduate Record Examination.

If an applicant does not meet the above requirements for regular admission, he may be admitted to a doctoral program on a conditional basis in one of two ways.

1. He must make a combined score of at least 900 on the aptitude sections of the Graduate Record Examination and must have a grade point average no lower than 3.25 on previous graduate work.
2. He must have a grade point average no lower than 3.5 on previous graduate work and must take a combined score of at least 850 on the aptitude sections of the Graduate Record Examination.

DEGREE PROGRAMS

Doctor of Education Degree in Elementary Education

RED 552—Educational Research: Descriptive Statistical Methods. Four hours.

RED 553—Educational Research: Significance Tests and Research Design. Four hours.

RED 796—Advanced Educational Research. Four hours.

CIF 716—History of Public Education in the United States. Four hours.

CIF 718—Comparative Philosophies of Education. Four hours.

EPY 503—Learning and Motivation I. Four hours.

or

EPY 510—Advanced Educational Psychology. Four hours.

AED 526—Supervision of Instruction. Four hours.

CIE 762—Seminar in Elementary Education. Four hours.

CIE 797—Independent Study and Research. Hours arranged. Not to be counted as credit toward a degree.

CIE 798—Dissertation.

In addition to the above thirty-two (32) hour core requirement, at least sixteen (16) hours must be earned in a subject field or fields and a minimum of twelve (12) hours in cognate areas, perferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Elementary Education with Emphasis in Early Childhood Education

RED 552—Educational Research: Descriptive Statistical Methods. Four hours.

RED 553—Educational Research: Significance Tests and Research Design. Four hours.

RED 796—Advanced Educational Research. Four hours.

CIF 716—History of Public Education in the United States. Four hours.

CIF 718—Comparative Philosophies of Education. Four hours.

EPY 503—Learning and Motivation I. Four hours.

or

EPY 510—Advanced Educational Psychology. Four hours.

AED 526—Supervision of Instruction. Four hours.

CIE 762—Seminar in Elementary Education. Four hours.

CIE 797—Independent Study and Research. Hours arranged. Not to be counted as credit toward a degree.

CIE 798—Dissertation.

In addition to the above thirty-two (32) hour core requirement, at least sixteen (16) hours must be earned in the area of early childhood education and a minimum of twelve (12) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Elementary Education with Emphasis in Reading

RED 552—Educational Research: Descriptive Statistical Methods. Four hours.

RED 553—Educational Research: Significance Tests and Research Design. Four hours.

RED 796—Advanced Educational Research. Four hours.

CIF 716—History of Public Education in the United States. Four hours.

CIF 718—Comparative Philosophies of Education. Four hours.

EPY 503—Learning and Motivation I. Four hours.

or

EPY 510—Advanced Educational Psychology. Four hours.

AED 526—Supervision of Instruction. Four hours.

CIE 762—Seminar in Elementary Education. Four hours.

CIE 797—Independent Study and Research. Hours arranged. Not to be counted as credit toward a degree.

CIE 798—Dissertation.

In addition to the above thirty-two (32) hour core requirement, at least twenty-eight (28) hours must be earned in the area of reading and a minimum of twelve (12) hours in cognate areas, preferably in the social sciences.

Electives should be chosen to complete a program consisting of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation.

Doctor of Education Degree in Secondary Education

RED 552—Educational Research: Descriptive Statistical Methods. Four hours.

RED 553—Educational Research: Significance Tests and Research Design. Four hours.

RED 796—Advanced Educational Research. Four hours.

CIF 716—History of Public Education in the United States. Four hours.

CIF 718—Comparative Philosophies of Education. Four hours.

EPY 575—Advanced Adolescent Psychology. Four hours.

AED 704—School Community Relations. Four hours.

or

AED 526—Supervision of Instruction. Four hours.

CIS 797—Independent Study and Research. Hours arranged. Not to be counted as credit toward a degree.

CIS 798—Dissertation.

The courses listed above will serve as a core program for students pursuing the doctoral degree in secondary education. The doctoral program consists of a minimum of 118 graduate hours, exclusive of the dissertation and statistics (RED 502, RED 552, and RED 553), beyond the bachelor's degree. More than 118 hours may be required in order to satisfy deficiencies which may exist in the student's background and preparation. Of the total number of hours required of a doctoral student in secondary education, approximately one half (½) must be taken in one of the subject areas listed under the heading **Master of Education Degree and Master of Science Degree in Secondary Education.**

ELEMENTARY EDUCATION COURSES (CIE)

G-403—**Kindergarten-Primary Education.** Four hours.

A study of the contributions which group living makes to the mental and physical health of young children, with emphasis upon child development research in curricular experiences and records. Designed to help teacher and parents understand the readiness program. Laboratory is included.

G-412—**Diagnosis and Remediation of Reading Disability for the Classroom Teacher.** Four hours.

This course deals with the need for corrective and remedial reading in the school; nature and causes of reading disability; procedure in making a classroom diagnosis, including interpretation of results; remedial treatment of reading difficulities to include techniques and materials; and some opportunity for testing and remedial teaching in the public schools.

G-490—**Workshop in Aviation Education.** Four hours.

A course designed to familiarize teachers, principals, and superintendents with developments and trends in aviation and aerospace exploration and with the implications of those developments on our social, economic, and political life. May be taken twice for a total credit of eight (8) hours.

G-491—**The Reading Conference I, II.** One and one-half hours each.

An intensive program for five days during the Summer Quarter consisting of lectures, group discussions, and demonstration lessons.

505—**Modern Concepts in Reading Skill Development.** Four hours.

This course makes an intensive study of the skills required in reading, up-to-date methods and materials required to teach these skills, and classroom techniques for evaluating proficiency in the development of these skills. This course provides an understanding in depth of reading for the experienced teacher and in-service training groups.

506—**Psychology of Reading.** Four hours.

This course deals with (1) the nature of reading, (2) reading as a perceptual process, (3) learning principles and the reading process, (4) motivation and reading interest, (5) personality factors in the reading process, and (6) readability.

513—Advanced Diagnosis and Remediation of Reading Disability for the Classroom Teacher. Four hours.

Prerequisite: CIE 506.

A course dealing with the need for corrective and remedial reading in the school; the nature and causes of reading disability; procedure in making a classroom diagnosis; disability analysis interpretation; classroom remedial treatment of reading difficulty to include techniques and materials.

515—Diagnosis and Remediation of Reading Disability for the Reading Clinician or Reading Specialist. Four hours.

Prerequisite: CIE 506.

This course deals through lecture, discussion, demonstration, and observation with: (1) the role of the reading clinician or specialist in current society; (2) reading clinic organization; (3) the nature and causes of reading disability; (4) procedure and tools used in making a diagnosis in the clinical setting; (5) disability and analysis interpretation; (6) remedial instruction in the clinic of reading disability including techniques and materials; (7) a limited requirement to be met in testing and teaching observation in clinic.

517—Professional Relationship in Improved Elementary Programs. Four hours.

A course designed to investigate behavioral factors of individuals and groups as they affect and improve elementary school environment. Concepts and techniques of elementary teacher behavior will be investigated in detail and in theory and practice.

521—Practicum in Remedial Reading. Four hours.

Prerequisite: CIE 515.

Methods and Materials. The course provides an opportunity to learn methods and materials useful in remedial instruction through laboratory experience with children with remedial reading difficulities. Course meets twice a week for discussion with four laboratory periods arranged.

524—Problems of Teaching Arithmetic. Four hours.

Prerequisite: MAT 318 or consent of instructor.

A study of techniques, particularly those related to number concept, or teaching arithmetic; an examination of research studies and of current practices used in teaching at the elementary school level.

525—Social Studies Education in Elementary School. Four hours.

Programs, practices, trends, and investigations of special problems; criteria for evaluating, planning, organizing and improving social studies programs.

528—Curriculum Problems in the Elementary School. Four hours.

A course involving analysis of elements of the curriculum. Emphasis is placed upon the implications of social life and the nature of the individual for curriculum development. Evaluates various curriculum procedures in terms of the implications.

529—**Reading in the Elementary School.** Four hours.

A course providing for extensive study of recent trends in materials and methods in reading in the elementary school including significant research studies which relate to these.

533—**Practicum in Diagnosis and Remediation of Reading Disability for the Classroom Teacher.** Four hours.

Prerequisite: CIE 515.

A course in which the student works with small groups of corrective reading cases, diagnosing needs, and teaching corrective lessons.

536—**Practicum in Reading Diagnosis.** Four hours.

Prerequisites: CIE 515 and PSY 588.

This course is to develop in the student the ability to make a complete reading diagnosis, interpret the results, make specific recommendations with regard to the diagnosis, and to be able to conduct a pre-and post-diagnosis parent interview.

537—**Practicum in Remedial Reading Instruction I.** Four hours.

This graduate course is to provide the student experience in interpertation of test results of reading disability cases, the selection of remedial materials, and teaching techniques which would be appropriate for different disabilities. The student will teach a remedial case and have experience in writing case progress reports.

537—**Practicum in Remedial Reading Instruction II.** Four hours.

This graduate course is an extension of the first practicum. The doctoral level student will need this additional experience.

570—**Practicum in Early Childhood Education.** Four hours.

A course of study concerned with the specific practices and research investigations relative to curriculum planning, administration, and supervision within early childhood laboratories. Observations and participation within the existing programs, including pupil contact and limited research activities, is required.

572—**Practicum with Parents.** Four hours.

An action research course dealing with specific techniques of counseling, intrapersonal relationship within family organization, parent-teacher interview techniques, parent-teacher organizations, and in-service counseling with parents of kindergarten and primary age pupils.

576—**Seminar in Early Childhood Education.** Four hours.

A study of general practice, theory, and research in the related fields of Early Childhood Education. The student will be involved with individuals and/or small groups of children in a practicum setting. The relatedness of the psychological, sociological, physiological and intellectual patterns and their impact upon child development will receive major attention. A scholarly report considering these factors mentioned above will be required.

577—**Evaluation in Early Childhood Education.** Four hours.

An introduction to specific principles and practices relative to group evaluative procedures with emphasis placed upon the developmental, diagnostic, and projective techniques, case study and standardized testing procedures within the early childhood education range.

578—**Creative and Mental Growth.** Four hours.

Research in the development of habits of creative thinking and its relationship to mental growth. Involving art, music, drama, creative writing, and other behavior patterns. Research exercises required.

580—**Research in Child Development.** Four hours.

Research in child behavior, child psychology, maturity factors, laboratory-experimental studies, physiologic development, experimental methods of preception in children, interpersonal relationship, behavior among children, or family life variables.

582—**History and Philosophy of Early Childhood Education.** Four hours.

A course of study concerned with in-depth investigations of Pestalozzi, Froebel, Montessori, and others representing schools of thought influencing the curriculum and program of young children. Investigations into the social and cultural changes which have influenced and modified early childhood programs will be treated in detail.

592—**Special Problems I, II, III.** One hour each.

A problem study to be approved by the appropriate department head to develop knowledge and facility in a field of interest for the student which requires preparation of a scholarly paper under the supervision of a graduate professor.

594—**Field Problems in Production I, II.** Four hours.

Opportunity to study local school problems of curriculum revision, course of study construction, evaluation of methods, building projects, community surveys, testing programs, and record systems under careful supervision of a graduate professor.

The project must be approved by the departmental chairman upon the recommendation of the student's major professor.

596 I—**Research in Reading.** Four hours.

This course is to provide the student with an intensive review of research in reading. The student will develop a prospectus for a research project in reading.

596 II—**Research in Reading.** Four hours.

In this course the student in the specialist program carries out the research project which he formulated in CIE 596 I. The project will be written under the guidance of his major professor and will be presented as his field problem which is a requirement for the specialist certificate.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

604—**Reading for Different Cultural Groups.** Four hours.

This course will review the current research relating to the culturally different. Implications of these research findings will be drawn to the field of reading, relating specifically the creation of appropriate materials and adapting methodology to these groups.

620—**Internship in Reading: Public School, Clinic, or Research.** Eight hours.

This is an instructional internship to prepare the individual to be able to assume a position in a public school as director or supervisor of reading instruction, or a position in a reading clinic. Since this is the capstone of the specialist program, an effort will be made to locate the student in the system where he will accept a position upon graduation. For those students going into research, an exchange program will also be set up with reading clinics and research groups in other states. In all three instances the student will work full time at his selected position, taking no other course work. There will be continuous evaluation of the student's progress during the internship between the University and the accepting agency.

662—**Research in Elementary Education.** Four hours.

Prerequisite: Advanced graduate status or permission of chairman of department.

A course designed to familiarize the student with the elements and methods of research, with the representative types of research, and with major contributions of research to the field of elementary education.

685—**Seminar in Reading Instruction.** Four hours.

Provides an intensive study in depth of facets of reading instruction.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problem.** Four hours.

Selection of practical educational problems for solution by candidates for education specialist certificate, using research and professional knowledge. A scholarly report is required.

762—**Seminar in Elementary Education.** Four hours.

Prerequisite: Advanced graduate status or permission of chairman of department.

An intensive examination into the issues relative to elementary school program. This course will be interdisciplinary in nature and will focus upon contributions of research, philosophy, history, sociology, and educational psychology as it applies to the resolution of major issues in elementary education.

791—**Research in Elementary Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major profesor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

SECONDARY EDUCATION COURSES (CIS)

G-462—**Curriculum of the Secondary School.** Two hours.

A critical examination of the present day curriculum with emphasis upon the core curriculum.

G-464—**Student Activities in Secondary Schools.** Two hours.

Consideration is given to the general nature and organization of the program popularly known as extra-curricular activities. Major emphasis is upon the various activities that constitute an activity program in a modern high school.

501—**Algebra for Secondary Teachers.** Four hours.

A consideration of problems peculiar to the teaching of algebra and a review of special algebraic principles.

506—**Geometry for Secondary Teachers.** Four hours.

A consideration of problems peculiar to the teaching of high school geometry and a review of special geometric principles.

508—**High School Curiculum.** Four hours.

Various designs of the curriculum as they apply to general and specialized education, and a critical evaluation of content of subject matter areas in terms of the needs of youth.

523—**Research and Problems in Mathematics Education.** Four hours.

A seminar for experienced teachers who wish to plan developmental programs of instruction in light of recent investigation and research. Topics to be considered include teaching strategies, language and symbolism, programmed instruction, current research in mathematics education, and other topics of general interest.

554—**Reading in the Secondary Schools.** Four hours.

A course providing for extensive study of recent trends in materials and methods in reading in secondary school including significant research studies which relate to these.

592—**Special Problems I, II, III.** One hour each.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major profesor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

600—**Seminar in Secondary Education.** Four hours.

An investigation of the major trends in the disciplinary areas of the curriculum with emphasis upon research findings within each area as related to how each contributes to the accomplishment of the objectives of the secondary school.

605—**Professional Subject Matter in Mathematics.** Four hours.

A study of ways to enrich the teaching of high school mathematics by the introduction of elementary topics from college mathematics.

607—**Materials in the Teaching of Mathematics.** Four hours.

A study of materials to be used in the teaching of secondary mathematics for multi-sensory aids, mathematics clubs, evaluation, and applications.

608—**Mathematics for Junior High School Teachers.** Four hours.

Prerequisite: To be teaching junior high school mathematics or have at least a minor in college mathematics.

A consideration of problems peculiar to the teaching of mathematics in grades 7, 8, and 9, and the organization of mathematical subject matter for these grades.

609—**Advanced Profesional Subject Matter in Mathematics.** Four hours.

Prerequisite: CIS 605.

697—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problem.** Four hours. (For Specialist Certificate)

791—**Research in Secondary Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

EDUCATIONAL FOUNDATION COURSES (CIF)

504—**Foundations in American Education.** Four hours.

A survey of the philosophies, psychologies, and history of American education intended to give the student a fundamental understanding of more specialized courses in these fields. Required of all graduate students.

507—**Basic Course in Curriculum Development.** Four hours.

A study of social and psychological factors influencing curricular planning, principles and procedures for validating educational objectives, selecting and structuring experiences, initiating and directing curricular change, and evaluating results of curricular planning.

509—**Social Foundations of Education.** Four hours.

A study of contrasting motivations and values of various cultural groups and their implications for education. Particular emphasis is given to the economically and culturally disadvantaged.

519—**Utilization, Selection, and Preparation of Audio-Visual Materials.** Four hours.

General principles, problems, and practices involved in the selecting, utilizing, and preparing of audio-visual materials for instructional purposes. Emphasis on the advantages, limitations, and practical uses of each major type of material.

532—**Measuring Results in Education.** Four hours.

A course designed to equip the teacher for effective selection and construction of tests for measuring specific achievement of teaching objectives and for statistical interpretation of data. Stresses use of teacher-made tests.

535—**Advanced Production Techniques.** Four hours.

Deals with the communications skills involving the production of basic types of audio-visual materials. Theory and practices are covered relative to planning, shooting, and editing picture stories.

560—**Economic Education for Teachers.** Four hours.

A course designed to assist teachers in obtaining a deeper knowledge and understanding of our economic system. Emphasis will be placed on the attainment of economic concepts and the correlation of these concepts into the social studies curriculum.

716—**History of Public Education in the United States.** Four hours.

A critical survey of the development of public education with emphasis on the social, political, religious, and economic forces that have influenced this development.

718—**Comparative Philosophies of Education.** Four hours.

A critical examination of philosophies and theoretical concepts of leading modern philosophies and their significance for education.

DEPARTMENT OF GUIDANCE (GED)

John Alcorn, Chairman

Boroughs Daniels Durkee Gates Gutsch Massey Weatherford

The Guidance Department offers programs at the master's, specialist, and doctorate levels in guidance, counseling, and student personnel services. The programs are designed to provide specialized professional preparation in the areas of: (1) School Guidance and Counseling; (2) College and University Student Personnel Work; (3) Community Agency Counseling; and (4) Counselor Education and Supervision.

MASTER'S DEGREES

The Guidance Department offers the Master of Education degree in school counseling, the Master of Science degree in college counseling, and the Master of Science degree in community counseling. The general requirements for these programs are as follows:

Admission:

Regular: An undergraduate grade point average of 2.75 and a combined score of 750 or above on the aptitude sections of the GRE

Conditional: A student may be admitted on a conditional basis if he has:

(a) A score of 750 or above on the aptitude section of the GRE and a grade point average no lower than a 2.5.

(b) A grade point average of 2.75 or above if the GRE is lower than 750.

Removal of Conditional Status: Maintain a B or better on each graduate course attempted during the first quarter as a full-time student. If a part-time student, a grade of B or better is required on the first twelve (12) hours or grades of B or better on all courses taken while completing the twelve-hour requirement.

Admission To Candidacy:

1. An application for admission to candidacy must be filed with the Department upon the completion of twelve (12) to sixteen (16) quarter hours of course work in the Department.
2. Satisfactory completion of the English Proficiency Test.

Application For Graduation: Graduation is based upon:

1. Completion of a minimum of forty-six (46) quarter hours course work in an approved program of studies.
2. Satisfactory completion of the comprehensive examination.

CURRICULUM PRESCRIPTIONS:

The Master of Education Degree in School Counseling: The course pattern is designed to provide learning experiences in the area of school guidance and counseling and will meet the professional and academic requirements for Class AA certification for elementary or secondary school counselors in Mississippi. A teaching certificate based upon a baccalaureate degree is a prerequisite for this program.

Required Courses (36 hours)

RED 501—**Research: Its Introduction and Methodology.** Four hours.
CIF 504—**Foundations in American Education.** Four hours.
GED 506—**Fundamentals of Guidance.** Four hours.
GED 522—**Organization and Administration of Pupil Guidance.** Four hours.
GED 571—**The Information Services in Guidance.** Four hours.
GED 581—**Methods and Techniques of Counseling.** Four hours.
GED 582—**Use and Interpretation of Tests in Guidance.** Four hours.
GED 587—**Analysis of the Individual.** Four hours.
GED 600—**Guidance and Counseling Laboratory I.** Four hours.
TOTAL: 36 hours.

Elective courses highly recommended: (10 - 12 hours)

GED 505*—**Guidance in the Elementary School.** Four hours.
GED 593 I—**Supervised Practicum.** Four hours.
PSY G-480—**Psychology of Personality.** Four hours.
or
SOC G-430—**Social Foundations of Personality.** Four hours.
ITE - 511—**Organization and Philosophy of Vocational Education.** Four hours.
PSY - 587—**Individual Psychological Testing: Stanford-Binet.** Four hours.
or
PSY - 588—**Individual Psychological Testing: Wechsler-Scales.** Four hours.

EPY - 510—**Advanced Educational Psychology.** Four hours.
EPY - 574—**Child Psychology.** Four hours.
EPY - 575—**Advanced Adolescent Psychology.** Four hours.
GED - 684—**Group Guidance.** Four hours.
SPE G-486—**Psychology and Education of the Exceptional Child.** Four hours.
*Required for Elementary Counselors.
TOTAL: 46 - 48 hours.

The Master of Science Degree in College Counseling: The course pattern is designed to meet the professional preparation needs of a variety of individuals who expect to work in the broad field of college student personnel services. Providing a flexible program through the selection of electives and participation in variable field practicum experiences, the program is geared to the needs of college student personnel workers such as counselors, deans of men and women, directors of housing, directors of student affairs, directors of placement, directors of admissions, and registrars.

Required Courses (32 hours)

RED 501—**Research: Its Introduction and Methodology.** Four hours.
CIF 504—**Foundations of American Education.** Four hours.
or
AED 711—**Higher Education in the U.S.** Four hours.
GED 506—**Fundamentals of Guidance.** Four hours.
GED 581—**Methods and Techniques of Counseling.** Four hours.
GED 582—**Use and Interpretation of Tests in Guidance.** Four hours.
GED 588—**Student Personnel Work in Higher Education.** Four hours.
GED 600—**Guidance and Counseling Laboratory I.** Four hours.
GED 593I—**Supervised Practicum.** Four hours.
or
GED 602—**Guidance and Counseling Laboratory II.** Four hours.

Elective Courses Highly Recommended (14 - 16 hours)

GED 684—**Group Guidance.** Four hours.
GED 571—**The Information Service in Guidance.** Four hours.
GED 586—**Seminar in Student Personnel Problems.** Four hours.
GED 580—**Marital and Pre-Marital Counseling.** Four hours.
EPY 510—**Advanced Educational Psychology.** Four hours.
or
EPY 512—**Learning and Instruction in Higher Education.** Four hours.
EPY 575—**Advanced Adolescent Psychology.** Four hours.
PSY G-455—**Social Psychology.** Four hours.
PSY G-480—**Psychology of Personality.** Four hours.
SOC G-450—**Social Institutions.** Four hours.
TOTAL: 46 - 48 hours.

The Master of Science Degree in Community Counseling: The course pattern for this degree program is purposely broad and flexible. It is designed to prepare individuals for counseling and personnel roles in a variety of community agency settings such as vocational rehabilitation, employment placement, community mental health, family and social welfare, church ministry, and business.

Required Courses: (28 hours)

SOC G-485—**Methods of Social Research.** Four hours.
or
RED 502—**Introduction to Statistics.** Four hours.

CIF 504—**Foundations of American Education.** Four hours.
or
CIF 509—**Social Foundations of Education.** Four hours.
GED 506—**Principles of Guidance.** Four hours.
GED 581—**Methods and Techniques of Counseling.** Four hours.
GED 582—**Use and Interpretation of Tests in Guidance.** Four hours.
GED 600—**Guidance and Counseling Laboratory I.** Four hours.
GED 593—**Supervised Practicum.** Four hours.
or
GED 602—**Guidance and Counseling Laboratory II.** Four hours.

Elective Courses Highly Recommended: (18 - 20 hours)

GED 682—**Community Resources for Guidance.** Four hours.
GED 684—**Group Procedures in Guidance.** Four hours.
GED 571—**The Information Services in Guidance.** Four hours.
GED 561—**Socio-Psychological Aspects of Disability.** Four hours.
GED 562—**Medical Aspects of Disability.** Four hours.
PSY G-445—**Social Psychology.** Four hours.
PSY G-480—**Personality Theory.** Four hours.
PSY G-481—**Abnormal Psychology.** Four hours.
PSY 588—**Individual Testing: Weschler Scales.** Four hours.
EPY 645—**Psychology of Mental Retardation.** Four hours.
SPE 505—**Psychology and Education of Emotionally Disturbed.** Four hours.
SOC G-429—**Juvenile Delinquency.** Four hours.
SOC G-420—**Industrial Sociology.** Four hours.
SOC G-430—**Social Foundations of Personality.** Four hours.
MGT 525—**Human Relations in Business.** Four hours.
MGT G-468—**Wage and Salary Administration.** Four hours.

TOTAL: 46 - 48 hours.

SPECIALIST CERTIFICATE

The Department of Guidance offers the Specialist Certificate in guidance and counseling with emphasis in (1) School Counseling, (2) College Counseling and Personnel Work, and (3) Community Counseling. As a sixth year advanced program, the specialist curriculum presupposes a master's degree in guidance or its equivalent and requires completion of an approved program of study including a minimum of forty-six (46) quarter hours credit beyond the master's degree.

The curriculum for the specialist program is purposely designed to be flexible in order that candidates may develop greater specialization in an area related to their individual professional goals. Included in the course of study is a minimum of twelve (12) quarter hours credit in cognate areas and an approved field study. The general requirements for the specialist certificate are as follows:

Admission:

Regular: A grade point average no lower than 3.25 and a combined score of 800 or above on the aptitude section of the GRE.

Conditional: A grade point average between 3.00 and 3.25 on previous graduate work and a GRE score no lower than 800 **or** a grade point average no lower than 3.25 and a GRE score between 750 and 800.

Removal of Conditional Status: On the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first twelve (12) hours of course work numbered 500 or above on all courses taken while completing this requirement.

Admission To Candidacy:

1. The application for admission to candidacy must be submitted upon the completion of twelve (12) to sixteen (16) quarter hours of course work in the Department beyond a master's degree in guidance or its equivalent.
2. The English Proficiency Test must be satisfactorily passed.

Application For Graduation: Graduation is based upon:

1. Completion of an approved program of studies containing a minimum of forty-six (46) quarter hours credit beyond a master's degree in guidance or its equivalent.
2. Satisfactory completion of a comprehensive examination.
3. Satisfactory completion, write-up, and defense of the field study.

DOCTORAL DEGREES

The Guidance Department offers the Doctor of Education (Ed.D.) and the Doctor of Philosophy (Ph.D.) degrees in guidance and counseling. General course requirements beyond the baccalaureate degree include a minimum of fifty (50) quarter hours work in the major area of guidance and counseling, a minimum of thirty (30) quarter hours work in an interdisciplinary supporting minor and the remainder of 118 hours work in foundations excluding research tools (languages and/or statistics) and dissertation.

Working from a common core of courses in guidance and counseling, the student may develop from among the following program emphases a program of study which is consistent with his professional needs and career objectives:

A. **School Guidance.** This emphasis is designed for individuals who expect to work as counselors, guidance directors, and directors of pupil personnel services in school settings.

B. **Student Personnel Work in Higher Education.** This emphasis is designed for individuals who expect to work as student personnel specialists and deans in college and university settings. Standards prepared by the Commission on Professional Development of the Council of Student Personnel Associations in Higher Education and the Interdivisional Committee of the American Personnel and Guidance Association serve as guides in developing programs of study.

C. **Counseling.** This emphasis is designed for students who are preparing for positions in college and university counseling centers and in community agencies such as vocational rehabilitation, the Veterans Administration, and other agencies which utilize skills and competencies of doctoral-level counseling specialists. Students taking this emphasis typically are given greater exposure to counseling and human development theory and engage in extensive laboratory practice in counseling with a range of normal clients.

D. **Counselor Education and Supervision.** This emphasis is designed for students who plan to engage in the teaching and training of counselors at the college and university level. Students in this program typically combine either the school guidance or student personnel emphasis with the counseling emphasis and, toward the end of their program, are placed in supervised internship experiences in counselor education and supervision.

General Requirements for the Doctoral Program

Admission:

Regular: A minimum grade point average of 3.50 on previous graduate work and a combined score of 850 on the aptitude section of the Graduate Record Examination.

Conditional: A grade point average between 3.25 and 3.50 on previous graduate work and a GRE score no lower than 850 **or** a grade point average no lower than 3.50 and a GRE score between 800 and 850.

Removal of Conditional Status: On the recommendation of the department chairman provided the student has attained a grade point average of at least 3.25 on the first twelve (12) hours of course work numbered 500 or above or on all courses taken while completing this requirement.

Qualifying Examinations:

1. Should be taken after completion of approximately twenty-four (24) quarter hours work in the Department beyond a master's degree or equivalent in guidance.
2. May not be taken prior to admission to a doctoral program and satisfactory completion of the English Proficiency Test.
3. May be retaken one time after an initial failure. Students may be asked to retake all or parts of the examination after complying with departmental recommendations regarding additional study and preparation. Oral follow-ups to the examination may be scheduled at the discretion of the Department.
4. The results on a master's degree or specialist certificate comprehensive examination may not be substituted for this examination.
5. The doctoral advisory committee will be appointed, and the course planning sheet will be filed after satisfactory completion of the qualifying examinations.

Comprehensive Examinations:

1. May be scheduled by individual appointment with the department chairman during or after the last quarter in which the student is enrolled in courses listed on the approved course of study.
2. Will consist of written and oral examinations.
3. May be retaken one time after an initial failure.
4. Must be completed a minimum of two quarters prior to graduation.

Residency:

1. Completion of the doctoral residency requires full-time on-campus study for three consecutive quarters. During the residency period, students are expected:

(a) To carry a minium course load of twelve (12) quarter hours per quarter for three consecutive quarters or, in the case of students on 1/2 time University fellowships, thirty-six (36) quarter hours work in consecutive quarters.

(b) To participate in a variety of credit and non-credit departmental activities including a residency seminar, laborary and practicum experiences, individual case work, field trips, and other related professional activities.

(c) To be relieved of job responsibilities with off-campus employers.

Admission To Candidacy:

Admission to candidacy for a doctoral degree will be approved by the student's advisory committee upon:

1. Completion of language and/or statistics requirements. Doctor of Education candidates will meet intermediate level statistics proficiency; Doctor of Philosophy candidates must show proficiency in one language and statistics.
2. Completion of residency requirements.
3. Satisfactory completion of the comprehensive examination.
4. Approval of a dissertation prospectus. The dissertation prospectus may be presented to the advisory committee for approval any time after the comprehensive examination has been satisfactorily passed.

Application For Graduation: Graduation is based upon:

1. Completion of all requirements described above.
2. Successful defense of the completed dissertation.

COURSE DESCRIPTIONS (GED)

505—**Guidance in the Elementary School.** Four hours.

A survey of guidance theories and practices as they relate to elementary education. Designed to give elementary teachers, principals, and counselors a fundamental understanding of the role of guidance in the elementary school.

506—**Fundamentals of Guidance.** Four hours.

A survey of vocational and educational guidance services designed to give teachers, administrators, and beginning counselors a fundamental understanding of the role of guidance in school programs.

516—**Vocational Guidance and Adjustment of Exceptional Children.** Four hours.

A study of guidance services and adjustment processes as they apply to atypical children including mentally retarded, physically handicapped, partially handicapped, partially sighted, partially hearing, etc., as well as early recognition and direction of gifted children.

522—**Organization and Administration of Pupil Guidance.** Four hours. Prerequisite: GED 506.

The course stresses administrative relationships in instituting and maintaining a program of guidance services, with a study of principles and techniques for formation and evaluation of a complete guidance program.

561—**Socio-Psychological Aspects of Disability.** Four hours.

This course is designed to help rehabilitation counselors more adequately understand the impact of disability on the rehabilitation process. Emphasis is given to theory and research findings from the social and behavioral sciences as they relate to the understanding of human disability. The case study method is used as an integrating activity.

562—**Medical Aspects of Rehabilitation.** Four hours.

This course is designed to familiarize students with medical terminology, with the muscular, skeletal and neurological systems, and with common diagnostic categories encountered in rehabilitation counseling. Understanding utilization of symptomatology, treatment, and other management aspects of physical medicine is emphasized. The major outcome is directed toward developing the counselor's ability to interpret medical information in conjunction with developing a plan of action for disabled clients.

571—**The Information Service in Guidance.** Four hours.

Prerequisite: GED 506.

A survey of practices in guidance programs which give teachers, administrators, and counselors knowledges and skills in setting up and maintaining an occupational information file and in making the materials available to students.

580—**Marital and Pre-Marital Counseling.** Four hours.

Prerequisite: GED 506 or consent of the instructor.

The course is designed to present information related to: (1) sex role concepts in the maturation of young people; (2) sex development and premarital and early marriage adjustment problems; and (3) successful techniques used in pre-marital and marital counseling as revealed in case studies.

581—**Methods and Techniques of Counseling.** Four hours.

Prerequisite: GED 506.

A course designed to acquaint the guidance worker with the basic fundamentals of counseling and interviewing the individual. Attention is given to both old and new methods and techniques used in counseling.

582—**Use and Interpretation of Tests in Guidance.** Four hours.

Prerequisite: GED 506.

A course designed to provide the counselor with means of securing, recording, and using data concerning individuals and groups. Emphasis is given to practical experience in using tests, inventories, and other devices for measurements.

586—**Seminar in Student Personnel Problems.** Four hours.

Discussion and analysis of a variety of problems facing workers in guidance, counseling and student personnel services. Special attention is given to the legal and ethical implications of personnel work.

587—**Analysis of the Individual.** Four hours.

Prerequisite: GED 506.

A study of methods and techniques used by teachers and guidance workers in helping individuals evaluate themselves, with consideration of collecting, assembling and using information. Emphasis is on subjective techniques.

588—**Student Personnel Work in Higher Education.** Four hours.

This course is designed to give students interested in entering personnel work at the college level a knowledge of the scope of personnel work, including those services basic to campus life, services for student growth, and services for special student groups. The professional nature of the personnel worker is emphasized.

592—**Special Problems I, II, III.** One hour each.

A problem study to be approved by the departmental chairman to develop knowledge and facility in a field of interest of the student. Preparation of a scholarly paper is required.

593—**Supervised Practicum I, II.** Four hours each.

This course provides students with opportunities to do guidance, counseling and/or small group work under supervision in settings appropriate to their area of specialization.

594—**Advanced Guidance Research Seminar.** Four hours.

An advanced course for students interested in individual and group research methods, materials, and procedures in the various guidance service areas.

596—**Field Problems I, II, III.** Two hours each.

This course provides students with the opportunity to do independent studies relating to problems of a practical nature which are encountered in field settings. Students are expected to develop a proposal for carrying out the study and a written report of findings at the conclusion.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

600—**Guidance and Counseling Laboratory I.** Four hours.

Prerequisite: Permission of instructor.

This course serves as an introduction to functional counseling practices. As a part of the basic guidance core, Laboratory I provides supervised practice in counseling activities that are primarily educational-vocational in nature. Particular attention is given to the development of competencies in counselor-client interaction, in the selection and proper use of tests and information as aids to the counseling process and in report writing. Attention is given to familiarization with intake procedures commonly used by counseling agencies. Students are expected to engage in a minimum of 30 contact hours with clients during the quarter.

602—**Guidance and Counseling Laboratory II.** Four hours.

Prerequisites: GED 600 or equivalent and permission of instructor.

This course is designed to bring about a more sophisticated understanding of educational, vocational, and personal--social counseling. Working under direct supervision through visual and audio monitoring, students work with a variety of clients and are expected to develop a high level of professional competency in counseling interaction, in individual assessment, and in test reporting. Counselors are expected to engage in a minimum of 45 contract hours with clients during the quarter.

603—**Guidance and Counseling Laboratory III.** Four hours.

Prerequisites: GED 602 or equivalent and permission of instructor.

This course serves as a more advanced phase of counseling laboratory training with a focus on counseling of a personal-special nature. Students are expected to develop competencies in utilizing a range of procedures designed to bring about positive growth with clients having personal-social difficulties. Working under close supervision, students receive feedback through both audio and video tapeing.

681—**Seminar in Systems of Counseling.** Four hours.
Prerequisite: Consent of instructor.
A course designed to explore both the theoretical and functional implication for interaction settings. Students shall explore in depth specific theories of counseling and the application of such theories to practice. Extensive use of video-tapes and other audio-visual materials will be made.

682—**Community Resources for Guidance.** Four hours.
Prerequisite: Consent of instructor.
A course designed to study the nature and development of agency resources within the community, along with their purposes and functions, such as vocational rehabilitation employment service, scouts, family counseling service, mental health centers, public welfare, and health agencies. Emphasis is on locating, understanding, and utilizing the services of the agencies in the exchange of information and for referral of counselees.

684—**Group Guidance.** Four hours.
A consideration of values of group activities, methods, and techniques in furnishing guidance services to the individual within groups. Democratic leadership methods guide students through attitudinal group sessions.

691—**Research in Guidance.** One to twelve hours.

697—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a research problem and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

698—**Research Problems.** Four hours.

700—**Internship in Student Personnel Services I, II.** Four to eight hours.
Prerequisites: GED 588 and consent of instructor.

740—**Testing College Students.** Four hours.
Prerequisite: GED 582 or equivalent course.
Students are introduced to major types of testing programs available to institutions of higher learning. Emphasis is given to functional uses to test data in key areas such as admissions, research and evaluation, long-range planning, and counseling.

750—**Readings in Student Personnel Work.** Four hours.
Advanced seminar in which students do extensive reading in social and cultural foundations of guidance and student personnel work. Weekly seminar is designed to structure and integrate reading activities. In addition to general reading, students select one area of special interest for term project.

760—**Administration and Organization of Student Personnel Services.** Four hours.
This course introduces students to the organization of student personnel services within the context of the college or university. Stress is given to administrative principles and relationships involved in initiating and maintaining an effective program of student services. Outside consultants and case studies are utilized.

791—**Research in Guidance.** One to twelve hours.
Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

C. E. McCarver, Chairman

Babin Haley Martin Milam Nesbitt Slay Stafford
Switzer Townley Webb Yarrow

The Department offers the Master of Education degree in health and physical education and the Master of Science degree in recreation. The Doctor of Philosophy and the Doctor of Education degrees are offered in physical education.

Admission:

Prior to beginning graduate study all students must (1) have filed an official transcript and an application to the Graduate School as outlined under ADMISSION REQUIREMENTS AND PROCEDURES in this **Bulletin,** and (2) have on file in the Graduate Dean's Office scores on the Graduate Record Examination and Miller Analogy Test.

FOR THE MASTER'S DEGREE

Procedures:

1. Upon the completion of the English Proficiency Test and twelve (12) quarter hours of course work at the University of Southern Mississippi, the student should submit to his major professor three copies of the Application for Admission to Candidacy Form. The major professor approves the application and forwards three copies to the Dean of the College of Education and Psychology.

2. One quarter prior to graduation, the student should submit four copies of the Application for the Master's Degree Form. All necessary signatures and the "fee paid" stamp of the Financial Secretary's Office must be secured. The major professor forwards the applications to the Dean of the College of Education.

3. The student must satisfactorily complete the comprehensive examination on the date scheduled in the **Graduate Bulletin** during the last quarter of course work or a quarter following completion of course work. The student should write a request for the examination to the department chairman at least two weeks prior to the examination date.

FOR THE MASTER OF EDUCATION DEGREE IN HEALTH AND PHYSICAL EDUCATION

Prerequisite: An undergraduate major or minor in health and/or physical education of thirty (30) quarter hours or the equivalent.

RED 501—**Research: Its Introduction and Methodology.** Four hours.

CIF 504—**Foundations in American Education.** Four hours.

CIF 507—**Basic Course in Curriculum Development.** Four hours.

or

EPY 510—**Advanced Educational Psychology.** Four hours.

(12 hours from the above)

PE 540—**Problems of Administration in Health, Physical Education, and Recreation.** Four hours.

HTH 540—**Marriage and Family Life.** Four hours.

HTH 542—**Advanced Physiology of Exercise.** Four hours.

PE 542—**Problems of Curriculum in Health and Physical Education.** Four hours.

PE 544—**Foundations and Trends in Health and Physical Education.** Four hours.

PE 584—**Test and Measurements in Health and Physical Education.** Four hours.

PE 598—**Thesis.** Six hours. Credit deferred until thesis is completed.*

HTH 546—**School Health Education.** Four hours.

REC 592—**Problems in Recreation.** Four hours.

(Elect 28 hours from the above.)

*Required only of students writing thesis.

Sufficient electives to equal a minimum of forty-six (46) hours.

The graduate student within the field of health and physical education is expected to be proficient in administration, curriculum, health education, evaluation, philosophy, scientific foundations, and recreation. It is anticipated that he will recognize any deficiencies and correct them by his course selection.

FOR THE MASTER OF SCIENCE DEGREE IN EDUCATION

REC 551—**Gerontology and Recreation.** Four hours.

REC 552—**Foundations, Trends, and Philosophies of Recreation.** Four hours.

REC 553—**Administration and Supervision in Recreaton.** Four hours.

REC 554—**Evaluation in Recreation.** Four hours.

REC 555—**Outdoor Education and Camping.** Four hours.

REC 592—**Problems in Recreation.** Four hours.

REC 598—**Thesis.** Six hours. Credit deferred until thesis is completed.

EDUCATION—Sixteen (16) hours selected with approval of major professor.

TOTAL—46 or 40 hours.

Free Electives—0 or 6 hours.

The graduate student within the field of recreation is expected to be proficient in administration, philosophy, evaluation, programs, health education, and physical education.

FOR THE DOCTORAL DEGREE

Procedures:

1. Upon completion of at least twelve (12) hours but before completion of thirty-two (32) quarter hours of work, all doctoral students must successfully pass the qualifying examination. The student should present to each member of his qualifying committee a biographical sketch and a typed copy of his planning sheet. The student is expected to write a request for the examination to the department chairman at least two weeks prior to the examination date.

2. After successful completion of the qualifying examination, the student will prepare eight copies of his planning sheet including thereon all recommendations of the committee which he obtains from the committee chairman. The committee chairman and all members of the committee sign the planning sheets and retain one copy for their files. Two copies are forwarded to the Graduate Dean. The department chairman should recommend a major professor at this time.

3. The student should request the department chairman to recommend (to the Graduate Dean) an advisory committee. The student must successfully present his dissertation prospectus and have it approved by this committee.

4. The student must satisfactorily complete the comprehensive examination on the date scheduled in the **Graduate Bulletin** during the last quarter of course work or a quarter following completion of course work. The student is expected to write a request for the examination to the department chairman at least two weeks prior to the examination date. This examination may be taken twice.

5. Upon completion of all requirements for the degree except the dissertation and at least two quarters prior to graduation, the student must file two copies of the Application for Candidacy in the Office of the Graduate Dean.

6. Two copies of the Application for Doctoral Degree should be filed with the Graduate Dean at least one quarter before graduation. The graduation fee must be paid before the application is filed.

7. A complete rough draft of the dissertation must be given to the major professor at least six weeks prior to the quarter the student intends to graduate. The major professor must notify the Graduate Office that the rough draft is acceptable at least one quarter prior to graduation.

8. Five completed copies of the final dissertation and the abstract must be submitted to the major professor during the first week of the quarter of graduation. Graduate student registration is considered the first day of the first week.

9. The final oral examination must be taken at least four weeks prior to graduation and the Graduate Office notified at least ten days in advance of the examination.

Examinations:

The doctoral student's first challenge after admission is the qualifying examination. The purpose of this examination is to determine the candidate's fitness to do doctoral work and to guide the committee in the selection of additional courses. In preparing for the qualifying examination, the student should take basic courses and do intensive study which will give him a well-rounded understanding of the following areas: administration, curriculum, evaluation, health education, history and philosophy, recreation, and scientific foundations. It is evident that a number of courses, required for the master's degree in physical education, are basic to these areas of understanding. Doctoral students who have not already completed these courses should consider them as required courses along with the others listed below. The courses are PE 540, 542, 544, HTH 540, 542, 546, and REC 592.

The Qualifying Committee will advise the successful candidate regarding the specific courses he must take. No changes may be made in these specific courses without the approval of the full Qualifying Committee. The Advisory Committee will approve additional courses to complete a program of minimum of 118 graduate hours exclusive of RED 552, 553, and PE 798 beyond the bachelor's degree. More than the minimum of 118 hours may be required to secure adequate breadth and depth in the student's preparation program and to satisfy deficiencies as revealed by the qualifying examination.

Following the qualifying examination, the student is advised to complete RED 552 and 553 both of which serve as prerequisites for PE 784.

Additional Required Courses For Doctoral Students: PE 570, 594, 750, 760, 784, 797, 798, and HTH 660.

COURSE DESCRIPTIONS

HEALTH (HTH)

G-437—**Driver Education.** Four hours.

Driver education provides an opportunity for public school teachers to obtain information on such items as program of instruction, use of training cars, delegation of authority, legal responsibilities, and qualifications of teachers.

G-453—**Methods of Driver and Traffic Safety Education.** Four hours.

Prerequisite: G-437.

Organization and administration of the driver education program, including scheduling, financing, and developing good public relations, will be primary areas of study.

G-456—**Simulation in Driver Education.** Two hours.

Prerequisite: HTH 437 and HTH 453.

Simulation is an audio-visual instructional method and has been designed to complement and supplement other instructional techniques utilized in the Driver Education program to prepare individuals to function safely and effectively in today's traffic.

G-482—**Kinesiology.** Four hours.

Prerequisites: BIO 101, 102, 103, and 228.

Analysis of movement based on a knowledge of anatomy and physiology as applied to the function of muscles in body mechanics.

540—**Marriage and Family Life.** Four hours.

This course is designed to help students who are interested in programs and materials for marriage and family life; social adjustment problems related to high school and college; special problems of counseling with these groups; and sources and methods of research.

542—**Advanced Physiology of Exercise.** Four hours.

Prerequisite: Proficient physiological background or permission of instructor.

A study which affords the student the opportunity to acquire knowledge about the physiological changes which occur during and after physical activity. The physiological changes include: circulatory, respiratory, endocrine, skeletal, muscular, and nervous systematic adjustments.

546—**School Health Education.** Four hours.

Intensive study in personal and community hygiene.

550—**Safety Education.** Four hours.
A study of the general program of safety education in public schools, with special reference to the selection and organization of materials, including the methods and techniques of instruction; visual aids, safety projects, special programs, and the utilization of the agencies outside the school.

583—**The School Health Program.** Four hours.
This course deals with the organization and operation of the school health program. Means of developing school health services, safe and healthful school environment, and effective school-community relationships are especially emphasized.

592—**Special Problems I, II, III.** One to three hours.

660—**Community Organization for Health Education.** Four hours.
Study of the philosophies of the community and the organizations that deal with health, with emphasis on group work techniques and their use in organizing the community for work in health education; current research in community organizations, and examination of programs of community health agencies.

791—**Research in Health.** One to twelve hours.
Prerequisite: Approval of the major professor.

PHYSICAL EDUCATION (PE)

G-401—**Preventive and Corrective Physical Education.** Four hours.
Recognition of and corrective exercises for functional abnormalties.

G-408—**Techniques of Teaching Rhythms.** Two hours.
Practical experiences in group instruction in various areas of dance.

540—**Problems of Administration in Health and Physical Education.** Four hours.
Consideration of problems faced by administrators of health, physical education, and recreation programs, including such things as staff selection, financial problems, teacher-student ratio, etc.

542—**Problems of Curriculum in Health and Physical Education.** Four hours.
Fundamental principles and bases of curriculum construction, analysis of activity for teaching purposes and program planning.

544—**Foundations and Trends in Health and Physical Education.** Four hours.
Scientific bases, history, principles, curricula, and professional preparation in health and physical education.

550—**Organization and Administration of Intramural and Extramural Activities.** Four hours.
Theory and practices in the organization and administration of intramural-extramural activities as they relate to finances, facilities, equipment, programming activities, and personnel.

570—**Facilities and Equipment in Health, Physical Education, and Recreation.** Four hours.
Planning facilities for health, physical education, and recreation with special consideration given to recommendations of the Athletic Institute, College Physical Education Association, and the National Recreation Association.

584—**Tests And Measurements In Health And Physical Education.** Four hours.

Tests of health, fitness, skills, and abilities. Administration and interpretation.

594—**Seminar in Health and Physical Education.** Two hours,

Discovery and recognition of problems, evaluation of problems and procedures, types and techniques of research.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

750—**Readings in Physical Education.** Four hours.

Extensive reading and discussion of works of men whose writings have had and will have strong influence on physical education programs in the schools and colleges of the United States.

760, 761, 762—**Physiological Effects of Motor Activity I, II, III.** Four hours each.

A graduate course that allows the student to reach an understanding of various physiological effects of activity and to enable him to pursue further any particular interest in this area.

784—**Principles of Design and Construction of Tests in Health and Physical Education.** Four hours.

Prerequisite: Proficient background in test and measurements or permission of instructor.

Techniques and procedures in designing and constructing tests in Health and Physical Education to include the following: (1) Elements to be measured; (2) Criterion establishment; (3) Preliminary selection of methods of measurement; (4) Characteristics of reliability, validity, objectivity, and practicality; (5) Establishment of final battery; (6) Test manual.

791—Research in Physical Educaton. One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

796—**Problems in Health and/or Physical Education I, II, III.** Two hours each.

Research in special physiological problems.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

RECREATION (REC)

551—**Gerontology and Recreation.** Four hours.

This course deals with the study of the aging process and recreational services as a technique which may enable the individual to achieve recog-

nition and status within his own community. The emphasis is placed upon the factors that promote intellectual, emotional, spiritual, and social maturity in older people.

552—**Foundations, Trends, and Philosophies of Recreation.** Four hours.

This course deals with the establishment of a discipline for the field of recreational service. Course content is concerned with concepts that are traceable to early Greek philosophy, Renaissance explorations, enlightenment, humanism, and contemporary philosophies of the American culture. The course presents a conceptualization of recreation, its foundation, philosophies, trends, and place in the American culture.

553—**Administration and Supervision in Recreation.** Four hours.

This course deals with the collected knowledge concerning the field of public administration, its principles, techniques and practices, particularly as it pertains to recreational agencies which provide unique services to the public at large; and more generally to the supervisory process and administrative leadership in recreational agencies.

554—**Evaluation in Recreation.** Four hours.

This course contains such vital procedures as: the quantitative and qualitative gathering of information about the recreational program; the creation of standards and the most effective means of comparison with known standards in the recreational process; the use of research techniques to discover the needs of people, to appraise existing facilities, to gauge public sentiment regarding program, to discern departmental development.

555—**Outdoor Education and Camping.** Four hours.

This course contains phases of outdoor education concerning conscious recognition and identification of natural phenomena which includes: (1) an introduction to the elements and philosophy of outdoor education as it is related to recreation; (2) the integration of the arts and sciences in outdoor education; (3) fundamentals of outdoor living or camping; and (4) methods of programming in an outdoor setting.

556—**Organization and Administration in Hospital Recreation Service.** Four hours.

This specialized professional course deals with the organization and administration of hospital services. It provides needed information of types of diseases, disabilities, and other infirmities to be encountered in various types of hospitals, and medical terminology utilized by the professional medical and technical staff in the hospital environment. Diseases that hospitalize people are studied with the aim of providing recreational experiences for the hospitalized person.

557—**Methods, Observation, and Participation in Hospital Recreational Service.** Four hours.

This course is designed to help the student understand the need for varying types of activity in relation to the disease or disability of the patient.

592—**Problems in Recreation.** Four hours.

Special attention to problems in recreation, including small town recreation, the school and recreation, coordinating community recreation services, field trips, public relations, program planning for given situations, and survey for recreational needs.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

DEPARTMENT OF INDUSTRIAL AND TECHNICAL EDUCATION (ITE)

E. Max Hunter, Chairman

The Department offers a program leading to the Master of Science degree.

Major in Industrial Arts Education: The student will be guided by the department chairman in selecting a minimum of thirty (30) quarter hours from courses offered in the Department, and sixteen (16) quarter hours in a minor area. The minor may include education, psychology, and guidance courses.

For additional information pertaining to the specific courses in the program, contact the department chairman.

COURSE DESCRIPTIONS (ITE)

G-400—**School Shop Planning and Equipment Selection.** Five hours.

Planning the lay-out of rooms and other building facilities. Purchase and arrangement of equipment. Selection of suitable equipment for special conditions. The cost of equipment, supplies, and maintenance.

G-401—**Shop Care and Management.** Five hours.

A study of machine placement; student movement; arrangement of safety zones; upkeep and repair of tools; tool storage and distribution; storage of materials; assembly areas; general appearance of the shop.

G-403—**Occupational Analysis and Course Construction.** Four hours.

Techniques and procedures in analyzing occupations into their basic elements and arranging these elements for instructional purposes.

G-404—**Problems of the Coordinator.** Four hours.

Problems, procedures, and techniques in the operation of cooperative, part-time, and evening school programs, including the study of state and federal regulations and reporting.

G-431—**Principles of Trade and Industrial Teaching.** Four hours.

Interest and the motivation of learning in the shop, the development of reasoning ability and manipulative skill, job and lesson planning, teaching devices and procedures, shop management, measurement of achievement, interschool and community relations.

G-432—**Problems of Adult Education.** Four hours.

Rise of the adult education movement; learning abilities, educational interests and needs of adults; problems and procedures in organizing and operating adult educational programs; relation of adult education to public school education.

G-433—**Curriculum Construction for Cooperative and Adult Vocational Classes.** Four hours.

The derivation of objectives; selection and arrangement of instruction units and materials for cooperative and evening classes; the construction and use of evaluative devices.

G-434—**Occupational Surveys.** Four hours.

A study of problems, methods, and procedures involved in planning, organizing and conducting occupational surveys in local communities and labor market areas.

502—**Foundations and Principles of Industrial Arts.** Four hours.

A basic course of the underlying philosophy and principles of industrial art education. Objectives and relations to allied fields. Research and individual reports required.

503—**Establishing the Industrial Arts Program.** Four hours.

A detailed consideration of the individual school program in industrial arts, its organization, physical and educational requirements, and coordination with other educational requirements. Specific problems studied and reported.

504—**Shop and Small Plant Design.** Four hours.

Fundamental problems in design of work space. Working drawings and reports required.

505—**History of Industrial Education.** Four hours.

A study of leaders, movements, and agencies in the development of industrial education. A critical consideration of economic and social factors in the development of industrial education in the United States is made.

506—**Philosophy of Industrial Arts Education.** Four hours.

A study and evaluation of the various viewpoints of the leading philosophers in the field.

507—**Organization of Instructional Materials in Industrial Education.** Four hours.

A systematic examination of instructional materials and methods in industrial arts; research and reports required.

511—**Philosophy and Organization of Vocational Education.** Four hours.

The basic principles involved in the development and operation of vocational programs under state and federal vocational laws.

530—**Advanced Graphic Science.** Four hours.

A study of the methods and materials used in graphic science, advanced engineering and architectural drafting. Study of the literature and techniques in this field.

562—**Research Methods: Industrial Arts.** Four hours. Required.

A study of research methodology in industrial subjects with emphasis on design of experiments, research procedures, and statistical treatments.

592—**Special Problems in Industrial and Technical Education.** One to four hours. **Required.**

Intensive study of a selected research area or problem in industrial and technical education.

594—**Seminar in Industrial Arts Problems I, II, III.** Two hours per quarter. May be taken three quarters.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

DEPARTMENT OF LIBRARY SCIENCE (LS)

Warren Tracy, Chairman

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The Department of Library Science participates in programs leading to the Master of Arts and Master of Science degrees. The general requirements for these degrees are outlined in Part IV of this **Bulletin.** As a prerequisite, a student must present the equivalent of the following undergraduate library science courses and meet the general requirements for admission to the University's graduate program: LS 301, LS 427, LS 428, LS 462, and LS 463. Students planning to use this program for a Class AA certificate must meet the requirements for a Class A certificate including LS 302, Books and Related Materials for Children, and LS 303, Books and Related Materials for Young People. Students will elect additional courses on the basis of their field of interest and the recommendations of their adviser.

For the Master of Arts degree, a minimum of forty-six (46) graduate hours is required, half of which must be in courses numbered above 500. In addition to thirty (30) hours of graduate courses in library science the student must complete sixteen (16) graduate hours in an academic minor approved by the Department, demonstrate proficiency in a modern language, and write a thesis. Appropriate graduate courses in research methods, principles of administration, statistics, etc., may be accepted as a part of the major when approved by the department chairman.

For the Master of Science degree, a minimum of forty-six (46) graduate hours is required, half of which must be in courses numbered above 500. In addition to thirty (30) hours of graduate courses in library science the student must complete sixteen (16) graduate hours in a minor approved by the Department. There is no foreign language requirement and the writing of a thesis is optional.

COURSE DESCRIPTIONS (LS)

510—**The Library in Society.** Four hours.

Particular attention is given to the public library's relationship to social, governmental, and educational agencies, and the national and international role of the library.

520—**History of Books and Printing.** Four hours.

525—**Communication and Libraries.** Four hours.
Introduction to the audience, content, control, and channels of distribution of newspapers, radio, television, and motion pictures, with special attention to the relationship of the library to these media and its role as an agency of communication.

530—**Advanced Reference and Bibliography.** Four hours.

535—**Advanced Classification and Cataloguing.** Four hours.
Prerequisites: LS 462 and 463.

540—**The College and University Library.** Four hours.

541—**The Public Library.** Four hours.

542—**Special Libraries.** Four hours.

550—**Library Service to Children.** Four hours.

555—**Library Service to Young People.** Four hours.

591—**Research in Library Science.** One to twelve hours.

592—**Special Problems I, II, III.** One to three hours.
Prerequisite: LS 540, 541, or 542.

594—**Field Problems.** Four hours.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

DEPARTMENT OF PSYCHOLOGY (PSY)

Ray S. Musgrave, Chairman

Baker Burgess Gough Grimsley Hildman Huckabee
Koeppel Lowe Lucy Moffat Mehearg Rabin
Sisemore Welker Yarnell

The Master of Arts and Master of Science programs in psychology are planned primarily to provide a foundation for advanced graduate work in psychology for students who intend to make psychology their profession, with training to the doctoral level. Students who successfully complete master's work may also qualify for some positions in schools, in state institutions and hospitals, in clinics, in industry, or with government agencies.

Students desiring to do graduate work in psychology must have a foundation of undergraduate courses in statistics and experimental psychology. Foundation courses in physiological psychology, psychological measurement, and the history of psychology are also highly recommended as prerequisites. A minimum total score (quantitative + verbal) of 1,000 on the Aptitude Section of the Graduate Record Examination is required for regular admission to graduate work in psychology. Students seeking admission to post-master's level work normally are required to come to the campus for a personal interview as a part of the application procedure for advanced standing.

General requirements for master's degrees are listed in Part IV of this **Bulletin.** For the Master of Arts degree with a major in psychology, the student must meet the foreign language requirement. Proficiency in a for-

eign language is not required for the Master of Science degree in psychology. A thesis is required for both the Master of Science and the Master of Arts degrees.

Programs leading to the Doctor of Philosophy degree are offered in general-experimental psychology, in clinical psychology, and in school psychology. The general requirements for doctoral degrees, listed in Part IV of this **Bulletin,** must be observed.

The sequence of courses leading to the Doctor of Philosophy degree in general-experimental psychology is planned to prepare students to be college and university teachers of psychology, or to become research workers in a variety of settings, including universities, governmental agencies, schools and hospitals, and industry.

The Doctor of Philosophy degree in clinical psychology is planned to prepare students for diagnostic, psycho-therapeutic and research work in a variety of settings which represent programs for community-wide prevention or amelioration of mental illness. The sequence of courses and other experiences provided for these students is outlined according to American Psychological Association standards. Included in the program are wide practicum and internship experiences both in the University Clinic, mental hospitals, and in community mental health and mental retardation settings.

The doctoral program in school psychology consists of a sequence of courses and other experiences which prepare students for a variety of psychological services in schools, or to conduct research in schools on psychological development, learning and pupil-teacher interaction, psychological measurement, educational psychology, and psycho-educational processes.

Students contemplating graduate work in psychology are invited to communicate directly with the Department of Psychology.

COURSE DESCRIPTIONS

PSYCHOLOGY (PSY)

PSY G-445—**Social Psychology.** Four hours. Winter and Summer.

Prerequisite: PSY 201.

Psychological factors and influences in group behavior. Study of the individual in group situations, and the influence of the social environment on his behavior and development.

PSY G-449—**Industrial Psychology.** Four hours. Fall

Prerequisite: PSY 201.

Applications of psychological principles and methods to problems of industry emphasizing employee selection and placement, merit rating, accident reduction, training and measurement and improvement of employee morale.

PSY G-451—**Psychological Measurement.** Four hours. Winter and Summer.

Prerequisies: PSY 201 and 360 or equivalent.

Theory, problems, and techniques of psychological measurement. Group tests of ability, aptitude, interests, and personality are emphasized.

PSY G-470—**Sensation and Perception.** Four hours.

Prerequisite: PSY 370.

A survey of sensory and perceptual processes with emphasis on the visual system.

PSY G-472—**Psychology of Learning.** Four hours.

Prerequisite: PSY 370.

A study of the basic problems, theories, concepts, and research in the areas of human and animal learning.

PSY G-474—**Comparative Psychology.** Four hours.

Prerequisite: PSY 370.

An introduction to the study of animal behavior with special emphasis on the comparison of psychological processes along the phylogenetic scale.

PSY G-480—**Psychology of Personality.** Four hours. Winter and Summer.

Prerequisites: PSY 201 and permission of the instructor.

A study of the factors involved in the development of the mature personality, with an analysis of the structure and dynamics of personality; critical review of methods of personality evaluation.

PSY G-481—**Abnormal Psychology.** Four hours. Fall and Spring.

Prerequisites: Good background in psychology and permission of the instructor.

Study of the major psychoses, the psychoneuroses, and mental deficiency. Primarily for psychology majors, premedical students, and students planning to enter law, social work, teaching, or the ministry.

PSY G-482—**Physiological Psychology.** Four hours. Winter and Summer.

Prerequisite: PSY 201.

Relationships between physiological functions, especially those of the nervous system, and psychological functions, including perception, emotion, motivation and learning. Primarily for psychology majors and pre-medical students.

PSY G-484—**History and Systems of Psychology.** Four hours. Fall and Spring.

Prerequisite: Permission of the instructor.

Review of the history of psychology and intensive study of current systems of psychology. Primarily for psychology majors as final senior course.

PSY 502—**Advanced Experimental Psychology.** Two hours. Fall and Winter. May be taken twice for credit.

Critical evaluation of and use of a variety of experimental techniques. Each student conducts an original study.

PSY 521—**Introduction to Projective Techniques.** Four hours.

Prerequisite: Permission of the instructor.

Introduction to the theory and use of various projective techniques in the study of personality.

PSY 522—**Personality.** Four hours.

Consideration of the major theories of personality, and research on the development and measurement of personality.

PSY 523—**Personnel and Industrial Psychology.** Four hours.

Intensive study of selected problems in industrial and personnel psychology.

PSY 524—**Physiological Psychology.** Four hours.

Study of neurophysiological mechanisms in behavior, and related problems.

PSY 531—**Clinical Psychology.** Four hours.

Prerequisite: Permission of the instructor.

A survey course intended to acquaint the student with the field of clinical psychology. Emphasis on the use of clinical tests in personality diagnosis, a survey of psychotherapeutic techniques, and the research functions of the clinician.

PSY 536—**Pre-Practicum in Clinical Psychology I, II, III, IV, V, VI.** One to two hours per quarter with a maximum of twelve quarter hours. Every quarter.

Prerequisites: PSY 521, 587, or 588, and permission of the instructor.

Open only to psychology majors planning to enter the clinical field.

This course is designed to give actual clinical experiences to the beginning graduate student. Administration and interpretation of psychological tests as well as therapeutic work with children and adults.

PSY 549—**Management Training and Development.** Four hours.

Study of the principles and procedures of the training and development of management, with emphasis on surveying training needs, applying the principles of learning and motivation in implementing training methods and techniques, and evaluating results of training and development.

PSY 562—**Research Methods: Descriptive Statistical Methods.** Four hours.

Prerequisite: PSY 360 or permission of instructor.

A brief review of measures of central tendency and variability with emphasis upon correlation theory, techniques of calculation and application of correlation methods to tests and research data. Introduction to sampling problems, Pearsons Product Moment Method of Correlation, biserial, point biserial correlations, tetrachoric correlation, contingency correlation, partial and multiple correlation.

PSY 563—**Research Methods: Significance Tests and Experimental Designs.** Four hours.

Prerequisite: PSY 562 or permission of instructor.

A brief review of descriptive statistics and normal curve functions. Study of inference and sampling theory emphasizing parametric and nonparametric tests of significance: critical ratio, t-test, chi square, analysis of variance, problems of experimental design.

PSY 587—**Individual Psychological Testing: Stanford-Binet.** Four hours.

Prerequisite: Approval of departmental head or instructor.

To equip psychological workers to administer individual intelligence tests, and to interpret and apply the test results for diagnosing difficulties in scholastic and personality adjustment. Thorough analysis and intensive practice in mental testing is afforded. The Terman-Merrill Revision of the Stanford-Binet is employed.

PSY 588—**Individual Psychological Testing: Wechsler Scales.** Four hours.
Prerequisite: Approval of departmental head or instructor.
To equip the psychological worker to administer individual intelligence tests, and to interpret and apply the tests results for diagnosing difficulties in scholastic and personality adjustment. Thorough analysis and intensive practice in mental testing is afforded. The Wechsler Scales are employed.

PSY 591—**Research in Psychology.** One to twelve hours.

PSY 592—**Special Problems I, II, III.** One to three hours. On demand.
Intensive study of selected research area or field of professional psychology.

PSY 594—**Seminar in Problems in Contemporary Psychology I, II, and III.** Two hours each quarter for three quarters. Fall, Winter, Spring sequence.

PSY 597—**Independent Study and Research.** Four hours.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

PSY 598—**Thesis. Six hours.** Credit deferred until thesis is completed.

PSY 602—**Experimental Design.** Four hours. Spring.
A study of the rationale underlying the selection of appropriate design for experimental work and the analysis and interpretation of results obtained through the use of such designs.

PSY 612—**Computer Simulation of Psychological Processes.** Four hours.
Prerequisite: Permission of the instructor.
A survey of basic concepts and current research in the area of "artificial intelligence" and computer models capable of "learning," being "conditioned," or solving discrimination and perceptual tasks in a manner similar to that displayed by animals and humans. The course assumes basic familiarity with computer programming methods as they apply to psychological research.

PSY 614—**Contemporary Theoretical Models in Psychology.** Four hours.
Prerequisite: Permission of the instructor.
An introduction to the role of model building in psychological research and contemporary models of basic behavioral phenomena. Emphasis will be on the adequacy of presently available theories and formal models of physiological processes underlying attention, perception, learning, motivation, sleep, and memory. Criteria for development of adequate formal theoretical models will be discussed.

PSY 620—**Philosophy of Science.** Four hours.
A study of scientific methodology, theory construction, and system building in modern psychology.

PSY 640—**Comparative Psychology.** Four hours.
An examination of methodology employed in animal research, and results of experimentation in the area of animal behavior.

PSY 650—**Motivation.** Four hours.
Prerequisite: EPY 503 or EPY 603.
A study of the current theories and research in the area of human and animal motivation.

PSY 651—**Advanced Psychological Measurement.** Four hours.
Prerequisite: PSY 562 (PSY 451 is recommended).
An intensive study of the theory and techniques of psychological measurement. Reliability, validity, combining tests into a battery, test construction and scaling are emphasized.

PSY 660—**Perception.** Four hours.

Prerequisite: Permission of the instructor.

The development and nature of human perception and its relation to adaptive behavior.

PSY 672—**Advanced Psychopathology.** Four hours.

Prerequisites: PSY 481, PSY 522, and permission of the instructor.

Intensive study of personality dynamics as related to aberrant behavior, with emphasis on current research.

PSY 701—**Factor Analysis.** Four hours. Summer.

Methods of multivariate analysis, emphasizing methods of factor analysis and cluster analysis.

PSY 710—**Personality Assessment.** Four hours.

Prerequisites: PSY 521 and permission of instructor.

A study of the theory and practice in the selection, administration, and interpretation of tests used in assessment of personality. It is recommended that this course be taken in conjunction with PSY 731 I.

PSY 731—**Clinical Psychology Practicum I, II, III.** Four hours each. Fall, Winter, and Spring.

Prerequisites: PSY 521, PSY 587, PSY 588, and permission of the instructor. Open only to psychology majors at the doctoral level.

An analysis of the interrelations between behavior disorders and psychodiagnostics with a view to the selection and application of appropriate therapeutic programs within a clinic setting.

PSY 740—**Systems of Psychotherapy.** Four hours.

Prerequisites: PSY 672 and permission of instructor.

An analysis of the theories and techniques of current systems of psychotherapy.

PSY 787—**Advanced Experimental Psychology I, II, III.** Four to twelve hours.

For graduate students who wish to conduct research on individual problems not included in graduate thesis. Emphasis is placed upon background preparation, design and analysis of research data. Problems should be of publishable quality.

PSY 791—**Research in Psychology.** One to twelve hours.

Prerequisite: Approval of the major professor.

PSY 792—**Seminar in Case Studies.** Two hours.

Prerequisite: Permission of the instructor.

Presentation of actual case studies for evaluation and discussion by advanced graduate students.

PSY 795—**Internship in Clinical Psychology.** Credit arranged.

Prerequisite: Successful completion of clinical psychology practicum and approval of Director of Clinical Psychology Training. Required calendar year of internship in a mental health setting approved by the American Psychological Association. Credit may not be applied toward a graduate degree.

PSY 797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

PSY 798—**Dissertation.**

EDUCATIONAL PSYCHOLOGY (EPY)

EPY 503—**Learning and Motivation I.** Four hours.

Consideration of the basic concepts, problems, and research methodology in the studying of learning and motivation.

EPY 510—**Advanced Educational Psychology.** Four hours. Fall, Spring, Summer.

Designed primarily for the graduate student wishing to broaden his knowledge in the field of psychology of learning. Careful study of research and experimentation dealing with individual and group learning.

EPY 512—**Learning and Instruction in Higher Education.** Four hours.

A study of the application of learning principles and instructional techniques in higher education.

EPY 520—**Intelligence: Theories and Development.** Four hours. Winter.

Nature of intelligence, and its development; critical evaluation of methods of measurement; relation of intelligence to social efficiency.

EPY 530—**Case Studies in School Psychology Problems.** Two hours.

A course designed to present the student with studies of clinical, school, and other psychological problems encountered by the school psychologist. Critical evaluation of the process and practice of writing and presenting case material.

EPY 540—**Interpretation of Psychological Tests for Exceptional Children.** Four hours.

Prerequisite: Permission of the instructor.

A study of the various psychological tests used in the appraisal and evaluation of exceptional children.

EPY 542—**Psychology of the Gifted Child.** Four hours.

Prerequisite: Permission of the instructor.

Study of the characteristics and needs of gifted children and the various means employed by the schools to provide for these children.

EPY 574—**Advanced Child Psychology.** Four hours. Winter and Summer.

A course dealing with the mental, motor, social, and emotional development of children of elementary school age. Stresses the application of developmental psychology to education and guidance. Considers child growth as progressive development.

EPY 575—**Advanced Adolescent Psychology.** Four hours.

An advanced study of the adolescent and his needs in the home, school, and community. Includes a survey of the research studies and literature on the period of adolescence, and individual and group reports.

EPY 580—**Leadership.** Four hours.

Prerequisite: Permission of the instructor.

Study of the factors affecting leadership in a school or industrial setting; emphasis is placed on status and esteem as factors.

EPY 591—**Research in Educational Psychology.** One to twelve hours.

EPY 593—**Seminar in Psychological Services in Schools I, II, III.** Two hours each. Fall, Winter, Spring sequence.

Advanced general psychology with special emphasis on relationships of each topic to the areas of school psychology, education of the handicapped, etc.

EPY 597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

EPY 598—**Thesis.** Six hours. Credit deferred until thesis is completed.

EPY 603—**Learning and Motivation II.** Four hours.

An intensive study of the role of contemporary theories of learning and motivation in current research.

EPY 610—**Group Dynamics.** Four hours.

Prerequisite: EPY 580 or permission of instructor.

A study of theory and practice in group development and group dynamics.

EPY 622—**Community Mental Health.** Four hours.

Prerequisite: Permission of the instructor.

Concepts and techniques of mental health consultation with emphasis on the psychologist's role in the field of mental health.

EPY 625—**Curriculum for the Mentally Retarded.** Four hours.

Study of different approaches to curriculum development, with emphasis on basic philosophy and goals of teaching the mentally retarded.

EPY 645—**Psychology of Mental Retardation.** Four hours. Fall.

Prerequisite: Permission of the instructor.

Study of personality development, problems of adjustment, and abnormal behavior of the mentally retarded. Consideration of psychological and medical treatment of the emotionally disturbed, mentally retarded individual.

EPY 670—**Seminar in Teaching of Psychology.** Two hours. Winter.

An analysis of the psycho-educational problems involved in the undergraduate and graduate teaching of psychology.

EPY 680—**Practicum in Teaching Psychology.** Four hours. On demand.

Supervised teaching of courses in psychology.

EPY 685—**Brain Damage and Behavior.** Four hours. Winter.

Prerequisite: Permission of the instructor.

The numerous causes of brain injury are studied and their effects on the mental and physical behavior of man are considered.

EPY 690—**Advanced Social Psychology.** Four hours.

A study of theory, research, and practice related to group processes and their interaction with individual behavior.

EPY 696—**Practicum in School Psychology.** Four hours. On demand.

Provides an opportunity to perform the duties of the school psychologist under supervision. Group and individual testing, contact with school personnel, individual counseling, and community relations will be stressed.

791—**Research in Educational Psychology.** One to twelve hours.

Prerequisite: Approval of the major professor.

EPY 792—**Special Problems.** Four hours.

EPY 797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

EPY 798—**Dissertation.**

DEPARTMENT OF SCIENCE EDUCATION (SCE)

Bobby N. Irby, Chairman

F. Brown I. Brown Craven Flowers Sonnier

The Department of Science Education recognizing the increased emphasis on the art of science teaching and the additional opportunities for individuals with advanced training in these arts provides a program for the Master's and the Doctor of Education degrees in Science Education.

In addition to the general requirements and procedures pertaining to graduate degrees as outlined in Part III and IV of this **Bulletin**, the following requirements must be fulfilled:

Master's Degree

1. Completion of fifty-eight (58) or sixty (60) quarter hours of graduate work.
2. A minimum of twenty-four (24) quarter hours in a specific science—biology, chemistry, geology, or physics.
3. A minimum of eight (8) quarter hours in related sciences.
4. Demonstration of competence in the following Professional Education areas:

   (a) Psychology of learning
   (b) History and philosophy of education
   (c) Statistical methods and procedures in education
   (d) Research methods in education
   (e) Guidance and educational testing
   (f) Public school science curriculum
   (g) Problems in science teaching

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty (20) quarter hours in professional education.
B. Thirty-eight (38) to forty-eight (48) quarter hours in the sciences and science education.

Approximately one-third of the graduate work will be in professional education and two-thirds in the sciences. Students with sufficient background are not required to take additional courses in professional education, but will complete their programs in the sciences.

A thesis carrying six quarter hours is optional and would substitute for two courses in education. The total program with thesis requires fifty-eight (58) quarter hours graduate credit. The thesis may involve research in a particular science or research in science education.

Doctor of Education Degree

1. Completion of a minimum of seventy-two (72) quarter hours of graduate work above that accepted at the master's level
2. A minimum of twenty-four (24) quarter hours in a specific science—biology, chemistry, earth science, or physics.
3. A minimum of eight (8) quarter hours in related science.
4. Competence in the areas of professional education as listed above.

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty-four (24) hours in professional education.
B. Thirty-two (32) or more hours in the sciences.
C. Twelve (12) or more hours in science education.

In all, two-thirds or more of the graduate work will be in the sciences and science education. In planning the overall program consideration is given to the student's background and his particular interests and goals.

Additional requirements include demonstrated proficiency in educational statistics and independent research. Research, culminating in a dissertation, may deal with a problem in the student's science speciality or a problem in science education.

In addition to an evaluation of the student's record, tests and examinations are used for diagnostic purposes in planning programs. The Graduate Record Examination verbal and quantitative scores and the National Teacher Examinations commons and teaching area scores should be submitted with the application for advanced graduate study. During the first or second quarter of study additional tests are administered by the Department and the College of Education and Psychology.

COURSE DESCRIPTIONS (SCE)

G-400—**BSCS—Biology for Secondary Teachers.** Four hours.
Six hour lecture - laboratory per week.
Prerequisite: Biology background or permission of the instructor.
A detailed critical examination of the subject matter, techniques, and methods for teaching biology in secondary schools as proposed by the Biological Sciences Curriculum Study. Designed to orient teachers in modern biology subject matter and special techniques by presenting background material and special laboratory exercises. Emphasis is placed on the laboratory as the source of information from which sound conclusions can be drawn.

G-401—**CHEM—Chemistry for Secondary Teachers—Methods and Techniques.** Four hours.
Two hours lecture and four hours laboratory work per week.
Prerequisite: Chemistry background or permission of the instructor.
A course designed to familiarize chemistry teachers with the materials, methods, and techniques of teaching chemistry developed by the Chemical Education Material Study Committee. Unifying principles of chemistry are emphasized, with laboratory work providing the basis of development. Not allowable as credit toward degree requirements for chemistry majors.

G-465—**PSSC—Physics for Secondary Teachers-Methods and Techniques.** Four hours.

Two hours lecture and four hours laboratory work per week.

Prerequisite: Physics background or permission of the instructor.

A course designed to familiarize physics teachers with methods, materials, and techniques of teaching physics developed by the Physical Science Study Committee. Not allowable as credit toward degree requirements for physics majors.

G-403—**Earth Science for Intermediate School Teachers.** Four hours.

Six hours lecture-laboratory work per week.

Prerequisite: Earth Science background or permission of the instructor.

A course designed to familiarize teachers with the materials, methods, and techniques developed by the Earth Sciences Curriculum Project. Emphasis is placed on laboratory and field work for data collection, and principles of other sciences as they relate to the study of the earth.

500—**Science Curriculum in the Public Schools.** Four hours.

Prerequisite: Permission of the instructor.

Involves a critical examination of the research, its implications, and trends in science course content. Course will include the use of seminars, research problems, independent study, advanced courses, etc., in the secondary schools.

501—**Problems in Science Teaching.** Four hours.

Prerequisite: Permission of the instructor.

A study of problems related to curriculum, methodology, activities, professionalism—scientific and educational, and evaluation in science teaching. Involves the examination of recent research in these areas.

502—**Techniques of Demonstrating and Experimenting with Scientific Principles.** Four hours.

Prerequisite: Permission of the instructor.

A course designed especially for general science teachers, considering fundamental aspects of biology, chemistry, geology, and physics. Provides for examination of modern material, equipment, and apparatus, and the use of the material in demonstrating and experimenting with scientific ideas.

510—**Physics for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

The physics course is designed principally for the purpose of providing teachers with a deeper knowledge of matter and energy and understanding of their relationships. The course is organized around principles and general ideas (and their developments) that can be directly applied to the elementary grade. Particular attention is given to quantitative processes pertaining to the understanding of the properties of matter and energy.

511—**Chemistry for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

In keeping with the current trends in chemistry teaching, major emphasis in this chemistry course will be placed upon: (1) relating ideas and facts; (2) understanding widely applicable principles; (3) placing heavy reliance upon laboratory work; (4) striving toward closer continuity between sub-

ject matter and pedagogy; and (5) deriving the necessary operational and conceptional definitions necessary to think about chemical systems. There will be a shift of emphasis from descriptive chemistry toward chemical principles to represent the changes in chemistry that have taken place over the last two decades.

512—**Biology for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

A course in general modern biology emphasizing the molecular aspects of animate matter.

513—**Earth Sciences for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

This course is designed to provide elementary teachers with a general background understanding of natural phenomena of the earth and its relationships in space. Particular emphasis is placed on those processes that are directly applicable to grades 1 through 6.

598—**Thesis. Six hours.**

791—**Research in Science Education.** One to twelve hours.

796—**Seminar.** Two hours each quarter for no more than three quarters. Meets for two hours weekly.

Discussion of current trends and practices in science education; invited speakers; and discussions of prospecti and research of current students in science education.

797—**Independent Study and Research.** Hours arranged. Not to be counted as credit toward degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF SPECIAL EDUCATION (SPE)

William V. Plue, Chairman

Cotten Musgrave Norsworthy

The Master of Education degree in special education is offered to prepare master teachers and administrative personnel in programs for the exceptional children. The program is interdepartmental and may be individualized depending on one's experience and background. Basically, the student will place his emphasis of study in one area of exceptionality (mental retardation, learning disabilities, emotionally disturbed, visually handicapped, or physically handicapped) plus one cognate area. Cognate area may include administration, counseling and guidance, psychology or educational psychology, exceptional children, reading, research, sociology, or speech correction as approved by the Department. The master's program requires twelve (12) quarter hours in foundations (RED 501, CIF 504, EPY 510), sixteen (16) quarter hours in major area, twelve (12) quarter hours in cognate area, and electives related to the individual's program to make a total of forty-six (46) quarter hours.

Courses required for Special Education certification in Mississippi must be taken and completed before a graduate degree will be given.

COURSE DESCRIPTIONS (SPE)

G-441—**Physiology and Hygiene of the Eye.** Four hours.

Identification, function, and care of eye as it relates to the visually handicapped.

G-442—**Methods and Materials in Teaching Visually Handicapped.** Four hours.

A study of practices commonly used in educational programs including Braille, space orientation, special materials, and organization.

G-450—**Psychology and Education of the Mentally Retarded.** Four hours. Summer, Fall, Spring.

A study of the social, emotional, physical, and intellectual characteristics of the mentally retarded; methods of diagnosis and differentiation; special class organization

G-453—**The Learning Disabilities.** Four hours.

A study of the social, emotional, physical, and intellectual characteristics of the perceptually handicapped; methods of diagnosis and differentiation; and special class organization. The relationship of this exceptionality to other learning disabilities will be discussed.

G-455—**Speech and Hearing Problems for the Classroom Teacher.** Four hours. Winter and Summer.

This course is designed to familiarize the public school classroom teacher and the education major with speech and hearing problems often found in the public school classroom.

Readings in special problems or individual research for students majoring in special education.

G-460—**Methods and Materials for Teaching the Mentally Retarded.** Four hours. Winter and Summer.

A study of methods and materials most useful in teaching the mentally handicapped. Emphasizes the use of arts and crafts as instructional media. This course will replace the ITE 319 —Handicrafts for Elementary Teachers.

G-461—**Psychology and Education of the Physically Handicapped.** Four hours.

A study of major handicapping conditions, adaptations, social, emotional, and intellectual considerations.

G-462—**Curriculum for the Physically Handicapped.** Four hours.

A study of educational programs for the physically handicapped.

G-465—**Methods and Materials for Teaching the Learning Disabilities.** Four hours.

A study of methods and materials most useful in teaching the perceptually handicapped. A variety of media and methods will be emphasized to meet the needs of this exceptionality and also possibly illustrate appropriate materials for other exceptionalities.

G-470—**Curriculum Adaptations for Teaching Handicapped Youth.** Four hours.

Examination of the educational needs of mentally, physically, and emotionally handicapped youth of secondary school age and methods of meeting these needs. Emphasizes the principles and procedures of the cooperative Special Education-Vocational Rehabilitation program.

G-486—**The Psychology and Education of the Exceptional Child.** Four hours. Fall, Spring, Summer.

Considers the psychological and educational needs of children in the atypical groups; physically, visually, or auditorially handicapped; defective speech, mentally retarded, or socially and emotionally maladjusted, and the gifted.

G-487—**Problems in Special Education.** Four hours. Fall and Summer.

Organization and administration at both state and local level of the education of the exceptional child.

G-490—**Workshops in Special Education.** Four and one-half hours. Summer.

Workshops in selected areas of special education.

G-495—**Psycho-Educational Evaluation of Exceptional Children.** Four hours.

Prerequisite: PSY 201. Required of special education majors.

Basic principles underlying measurement and evaluation in education with emphasis on interpretation as it relates to exceptional children.

500—**Seminar in Special Education: Research Applications.** Four hours. Alternate Summers.

Considers recent research and its application to the various areas of special education.

505—**The Psychology and Education of the Emotionally Disturbed and Socially Maladjusted.** Four hours.

This course will be concerned with an investigation of the case-study method and its implication for the teacher as a part of a clinical-education team. A study of systematic observation of the behavior and the recording of behavior will be made. Techniques of working with parents will be investigated.

508—**Basic Curriculum for the Emotionally Disturbed and Socially Maladjusted.** Four hours.

A course dealing with programs, methods, and materials in the education of the emotionally disturbed child; the role of the teacher in relation to a team of specialists; use of resources, records, and reports.

513—**Issues in Extreme Learning Disabilities.** Four hours.

A theorectical and philosophical study of concepts related to neurological factors, dyslexia, and the autistic in learning disorders.

580—**Advanced Practicum in Special Education.** Six to twelve hours.

Supervised diagnostic teaching for advanced students in exceptional children.

587—**Supervision of Program for Exceptional Children.** Four hours.

Prerequisites: SPE 486 and AED 520.

This course is designed for public school administrators and supervisors of programs for exceptional children. It will provide information concerning the organization and administration of programs for exceptional children. The availability of resources and resource personnel for these programs on the school and the community.

591—**Research in Special Education.** One to twelve hours.

592—**Special Problems I, II.** Two hours each. Alternate Summers.

Examination of medical, sociological, biological, psychological, and institutional aspects of exceptional children.

594—**Field Problems.** Four hours.

595—**Advance Psycho-Educational Evaluation of Exceptional Children.** Four hours.

Interpretation and application of measurements for exceptional children.

Prerequisites: RED 501 and one course in test and measurement or statistics. Required of special education majors.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.**

692—**Reading and Research in Special Education I, II, III, IV.** One hour each. On demand.

694—**Advanced Seminar in Special Education I, II.** Two hours each. On demand.

Problems of diagnosis, treatment, critically reviewing the literature, and designing and conducting research on exceptional children are considered.

696—**Field Problems in the Administration of Special Education.** One to six hours. credit. On demand.

Students participate in the activities of an organization involved in administering or teaching special education. This may be at the state or local level, and the student gains supervised experience in an organized program.

735—**Advanced Study of Problems and Issue in Special Education.** Four hours. May be repeated for credit. On demand.

Study of special problems and issues such as philosophy, law, administration, implementation of programs, etc.

791—**Research in Special Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

796—**Practicum in Case Work and Guidance of the Exceptional Child.** Two to eight hours. On demand.

Individual cases are tested by students and all available information is integrated for diagnostic and educational purposes.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

THE COLLEGE OF SCIENCES

The College of Sciences offers the Master of Arts, the Master of Science, the Master of Philosophy, and the Doctor of Philosophy degrees in several disciplines. The Doctor of Education with a major in mathematics and a Doctor of Education in Science Education are also offered.

Each department in the College has certain requirements in addition to those mentioned in Part Four of this **Bulletin,** and students are advised to study the departmental requirements.

DEPARTMENT OF BIOLOGY (BIO)

Peter K. Stocks, Chairman

Abbott	Cliburn	Fish	Fischer	Gunter
Harrises	Lewis	Pessoney	Smith	Walker

Master's Degree Programs

The Department of Biology participates in programs leading to the Master of Arts, Master of Science, and Master of Education degrees. For these degrees a minimum of forty-six (46) graduate hours are required, sixteen (16) of which should be in a minor area to be determined by the chairman of the department of the student's major professor. Twenty-four (24) of these hours must be courses numbered above 500. An acceptable problem in research must be completed and terminated by a thesis and an oral examination defending the thesis. Within the Department the student may major in zoology, botany, and in conjunction with the Gulf Coast Research Laboratory in marine biology.

The general requirements for the Master of Arts and the Master of Science degrees are found in Part IV (General Academic Regulations and Requirements) of this **Bulletin.**

Doctoral Programs

The Department of Biology offers the Doctor of Philosophy degree with majors in botany, zoology, and in conjunction with the Gulf Coast Research Laboratory in marine biology. The Department of Biology feels that the degree of Doctor of Philosophy is not to be conferred because of a successful completion of predetermined number of credit hours, but only in recognition of excellence in research and scholastic attainment. Work at the Gulf Coast Research Laboratory is recognized as resident work.

COURSE DESCRIPTION (BIO)

All undergraduate courses that may be allowed for graduate credit are numbered in the G-400's. All graduate courses are numbered in the 500's, 600's, or 700's and may NOT be taken by undergraduates.

G-400—**Protozoology.** Four hours.

Prerequisites: BIO 101, 102, and 103.

Two theory periods and two 2-hour laboratory periods per week.

Studies are made of free-living and parasitic protozoa concerning their structure and life histories. Vital stains and permanent mounts are utilized.

G-401—**Genetics.** Four hours.

Prerequisites: BIO 101, 102, and 103.

A study of fundamental problems of inheritance and the cytological mechanics of heredity. The student will be required to make periodic reports on current literature in the field of genetics.

G-409—**Introductory Phycology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: BIO 104 or 339.

Consideration of the algae; nature, position, classification and importance. Laboratory devoted to general procedures of cultivation, identification, and morphology.

G-410—**Introductory Morphology of Plants.** Four hours.

Three hours lecture and two hours laboratory per week.

Prerequisite: Advanced standing in botany.

Laboratory devoted to study of extant and fossil vascular plants.

G-411—**Plant Ecology.** Four hours.

Prerequisite: Advanced standing in botany.

Relationship of plants to their environment.

G-412—**Plant Physiology I.** Four hours.

Two theory and two laboratory periods per week.

Prerequisite: General botany (Botany 104 or its equivalent). General chemistry and organic chemistry recommended.

Studies of basic physiological processes of green plants: greenhouse laboratory work.

G-413—**Plant Physiology II.** Four hours.

Prerequisite: BIO G-412.

A continuation of BIO G-412.

G-415—**Cellular Physiology I.** Four hours.

G-417—**Taxonomy of Higher Plants.** Four hours.

Prerequisites: BIO 101 and 104.

Two theory periods and two 2-hour laboratory periods per week.
A study of classification of both wild and cultivated seed plants.

G-418—**Field Zoology: Macroscopic Invertebrates.** Four hours.

One hour lecture and six hours laboratory per week.

Prerequisites: BIO 101, 102, and 103.

Collection, preservation, identification, and general biology of local, macroscopic, marine, fresh-water and terrestrial invertebrates. Field work as needed.

G-419—**Field Zoology: Microscopic Invertebrates.** Four hours.

One hour lecture and six hours laboratory per week.

Prerequisites: BIO 101, 102, and 103.

Collection, preservation, identification, and general biology of local, microscopic, marine, fresh-water and terrestrial invertebrates. Field work as needed.

G-421—**Embryology I.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.

Prerequisites: BIO 101, 102, 103, 301, and 302.

The embryological development of vertebrates, especially the frog, will be studied. Maturation, fertilization, cleavage, origin and development of germ layers, histogenesis and organogenesis are considered.

G-422—**Embryology II.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.

Prerequisite: BIO G-421.

A continuation of BIO G-421

Development of vertebrates, especially the chick and the pig, will be studied. Histogenesis and organogenesis of the chick, pig, and human are considered.

G-423—**Plant Anatomy.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: BIO 104.

A study of the anatomy of recent and fossil plants.

G-424—**Histology.** Four hours.

Three lecture periods and two hours laboratory per week.

Prerequisites: 24 hours of biology.

A thorough study of the principal tissues and organs of the body.

G-425—**Introductory Mycology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: Bacteriology 339 and 340 or consent of instructor.

A study of the general classification of yeast and molds, their physiology and biochemical activities.

G-427—**Biogeography.** Two hours.

Two lectures per week.

A descriptive and analytical study of the distribution of plants and animals.

G-430—**Mammalian Physiology I.** Four hours.

Three hours lecture and one two-hour laboratory period per week.

Prerequisites: BIO 101-103, BIO 228 or 301-302.

A basic course in mammalian physiology. An in-depth treatment of the major physiological systems of the normal mammal; emphasis on the interrelationship of various system and on the regulation of the internal environment.

G-432—**Mammalian Physiology II.** Four hours.

Prerequisite: BIO G-430.

Continuation of Mammalian Physiology I.

G-433—**Medical Entomology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: BIO G-452.

The study of the various species of arthropods of medical importance.

G-435—**Mammalogy.** Four hours.

Two hours lecture and four hours laboratory and field work per week.

Prerequisite: BIO 301 or 302 recommended.

Morphology, taxonomy, life history, distribution, evolution, and adaptations of mammals.

G-437—**Ornithology.** Four hours.

Two hours lecture and four hours laboratory and field work per week.

Prerequisite: BIO 301 or 302 recommended.

Morphology, taxonomy, life history, distribution, evolution, and adaptations of birds.

G-438—**Botany I.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.

Prerequisites: BIO 101 and 104.

A study of gross and microscopic structures, physiology, life cycles, and economic significance of the Thallophytes.

G-439—**Botany II.** Four hours.

Two theory periods and two 2-hour laboratory periods per week.

Prerequisite: BIO G-438.

A study of Bryophytes and Pteridophytes.

G-448—**Comparative Animal Physiology I.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: 16 hours of biology, 12 hours of chemistry.

A study of the physiological activities of different kinds of animals by comparing physiological and biochemical systems. Topics will be selected for detailed consideration in lectures with outside reading and class discussion.

G-449—**Comparative Animal Physiology II.** Four hours.

Prerequisites: Same as for BIO G-448.

A comparsion of vertebrate physiological systems emphasizing the influence of the environment on the animal.

G-450—**Principles of Nomenclature.** Two hours.

Prerequisites: BIO 101, 102, and 103 and BIO 360, 417, or 466.

Discussions and problems in botanical and zoological nomenclature.

G-452—**Entomology.** Four hours.

Prerequisites: BIO 101, 102, and 103.

This course will deal with the principal groups of insects. Life habits, structural features, life histories, and classification of certain species of economic and general significance will be considered.

G-455—**Experimental Embryology.** Four hours.

Prerequisites: BIO 421 and 422.

Emphasis on ascertaining the factors which activate or regulate developmental processes and devising experiments in which living embryos are made to supply data for the information desired.

G-466—**Ichthyology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 101, 102, 103.

Collection, preservation, and identification of local species of fishes and fish-like vertebrates, with primary emphasis on fresh water forms. Field work when possible.

G-468—**Parasitology I.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 101 and 102.

The epidemiology, morphology and importance of animal parasites, with emphasis on those affecting man.

G-469—**Parasitology II.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: G-468 or consent of instructor.

A continuation of G-468.

G-479—**Introduction to Biological Oceanography.** Four hours.

Four hours per week.

Prerequisites: G-481 and G-482.

Introductory study of fundamentals of oceanography to acquaint the student with major ocean basins and their characteristic topography. Physical and chemical characteristics of sea water will be examined from biological viewpoint. The course is intended as prerequisite for BIO 515.

G-481, G-482, G-483—**Ecology.** Twelve hours.

Two theory periods and two 2-hour laboratory periods per week.

Prerequisites: An acceptable background in biology, chemistry, and physics.

An intensive advanced study of the relationship between organisms and their environment.

G-484—**Limnology.** Four hours.

Prerequisites: BIO 101, 102, 103; G-481 and G-482 strongly recommended.

A study of the physical, chemical, and biological conditions in lakes, ponds, and streams. Lectures, laboratories, and field trips. Spring.

G-485—**History of Biology.** Two hours.

Prerequisites: 36 quarter hours of biology.

Lectures and readings concerning the development and organization of biological sciences. The development of biological principles and theories will be emphasized. For seniors and graduate students only.

G-492—**Biological Problems I, II, III.** Two hours each.

Given only by special arrangement.

A course in special techniques, designed for majors with a need for certain basic biological techniques as tools for future research.

502—**Taxonomy of the Flowering Plants for High School Teachers.** Four hours.

Eight hours lecture-laboratory and/or field trips per week.

A course especially designed for high school teachers with emphasis on plant identification and environmental relationships.

507—**Advanced General Botany for High School Teachers.** Four hours.

Eight hours laboratory-discussion and/or field trips per week.

Designed specifically to acquaint high school biology teachers with the utilization of local flora in teaching high school biology and providing the teacher with information on general physiology and ecology of seed plants.

511—**Vertebrate Biology for High School Teachers.** Four hours.

Eight hours lecture-laboratory and/or field work per week.

Designed specifically for teachers of biological sciences who may have failed to receive training in the biology of the vertebrates during their undergraduate years. Techniques of collection and preservation of specimens are emphasized.

512—**Cytology I.** Four hours.

Four hours lecture per week.

Prerequisite: 12 hours of chemistry, 12 hours of physics, or permission of the instructor.

A study of cells, their organelles, metabolism, growth, differentiation, and reproduction.

513—**Cytology II.** Four hours.

Four hours lecture per week.

Prerequisite: BIO 512.

A continuation of BIO 512.

515—**Biological Oceanography.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: BIO 482 or G-482.

A consideration of the sea as a biological environment, of the organisms which inhabit the sea, and of the interrelationships existing between marine organisms and the physical, chemical, and biological aspects of their environments.

520—**Advanced Herpetology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 360 and permission of instructor. BIO 301, 302, recommended.

Advanced taxonomic considerations: morphology, physiology, embryology; ecology, habits, natural history; economic herpetology.

521—**Advanced Systematic Herpetology.** Four hours.

Intensive lecture-laboratory course in systematic and distributional problems. Open only to especially qualified advanced students upon permission of instructor.

525—**Advanced Ichthyology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 466 or G-466 and permission of instructor. BIO 301, 302, recommended.

Advanced taxonomy of fresh-water and marine fishes; morphology, physiology, embryology; ecology, habits, natural history; economic ichthyology.

526—**Advanced Systematic Ichthyology.** Four hours.

Intensive lecture-laboratory course in systematic and distributional problems. Open only to especially qualified advanced students upon permission of instructor.

527—**Speciation.** Two hours.

Prerequisite: BIO 401 or G-401.

A study of the contributions of the various fields of biology to the modern concepts of phylogeny and the origin of the species.

530—**Helminthology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO G-468 and G-469.

A study of the morphology and life cycle of helminthes. Also collecting, staining, and identifying helminthes from vertebrates of this area.

532—**Parasite Physiology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO G-414 and G-415.

A study of the theories and laboratory procedures involved in physiological parasitology. Methods of in-vitro cultures and qualitative and quantitive techniques employed in the laboratory.

540—**Industrial Microbiology.** Four hours.

550—**Advanced Taxonomy of Seed Plants.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: BIO 104 and 417.

A study of classical and modern plant taxonomy including experimental approaches to problems in taxonomy dealing with the species and infraspecific taxa and the various methods employed to analyze and delimit these. Laboratory will be devoted to the classification of seed plants.

552—**Biology I. Analytical Methods in Biological Research.** Two hours.

Two hours laboratory and lecture work combined.

Prerequisites: Inorganic and organic chemistry, 36 quarter hours biological science. One year of physics also recommended.

This course is for graduate students only in which the students will be taught to use some of the more modern instruments for biological research such as the flamephotometer, a recording spectrophotometer, Warbug apparatus, etc.

552—**Biology II. Analytical Methods in Biological Research.** Two hours.
Continuation of above.

560—**Topics in Marine Biology.** Two hours.
Prerequisites: BIO 101, 102, 103; CHE 301, 302, 303.
Emphasis will be placed on topics concerning the physiological and biochemical processes peculiar to the marine environment which would not be available to the student in more typical courses.

563—**Fisheries Biology.** Four hours.
Two hours lecture and four hours laboratory or field work per week.
Prerequisites: BIO 466 or G-466. BIO 484 or G-484 highly recommended. Permission of instructor.
Ecology and conservation of fishes.

564—**Biological Photography.** Two hours.
One hour of lecture and two hours laboratory per week.
A study of the techniques involved in micro- and macro-biological photography.

567—**Marine Ecology. Four hours.**
Two hours lecture and four hours laboratory or field work per week.
Prerequisite: BIO 482 or G-482.
An analysis of the physicochemical nature of the marine environment and of the interrelationships of marine organisms and their environment.

568—**Planktology.** Four hours.
Two hours lecture and four hours laboratory or field work per week.
Prerequisite: BIO 418 or G-418 or BIO 453 or G-453.
A consideration of the planktonic organisms, their morphological adaptations, and life histories.

569—**Invertebrate Embryology.** Four hours.
Two hours lecture and four hours laboratory or field work per week.
Prerequisites: BIO 101, 102, 103.
A consideration of the ontogeny of the invertebrates and the significance of life history to phylogenetic speculation.

582—**Physiology of Marine Animals.** Four hours.
A detailed treatment of the environmental physiology associated with life in the sea. Both invertebrate and vertebrate groups will be covered.

584—**Seminar in Animal Behavior.** Two hours.
Graduate level seminars to be given on various topics in the field of ethology. No text will be assigned, but various titles will be made available and subjects will be assigned on the basis of available literature and interest.

586—**Seminar in Physiology.** Two hours.

Advanced topics in various areas of physiology, such as specialized portions of environmental and cooperative physiology, will be assigned depending on the particular interest of the group. Use will be made of recent literature and texts in each field. There will be no formal textbook.

592—**Special Problems in Biology I, II, III, IV.** Two hours each.

Prerequisite: A thorough background in biology.

Individuals will be assigned some specific problem in biology to investigate under faculty direction. Credit will be determined by the quality and quantity of work done varying from two to a maximum of eight hours.

596—**Biology Seminar I, II, III.** One hour each.

The presentation and defense of current, classical concepts and principles of biology.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

600—**Advanced Problems in Marine Microbiology.** Credits (maximum six hours) and schedules by arrangements.

Prerequisites: Marine Microbiology (BIO 565) and consent of instructor.

Supervised research problems and projects selected to meet the needs of the graduate students of microbiology or marine biology.

601—**Research Zoology.** Credits to be arranged for maximum of eight quarter hours.

604—**Research in Marine Biology.** Credits to be arranged.

791—**Research in Biology.** One to twelve hours.

Prerequisite: Approval of the major professor.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

COURSES TAUGHT AT THE GULF COAST RESEARCH LABORATORY IN OCEAN SPRINGS BY THE GULF COAST RESEARCH LABORATORY STAFF

G-429—**Marine Botany.** Six hours.

Prerequisites: General botany, plant taxonomy, and BIO 339.

A survey, based upon local examples, of the principal groups of marine algae, treating their structure, reproduction, distribution and general biology; including a survey of the common maritime flowering plants, their identification and ecology.

G-431—**Marine Vertebrate Zoology.** Nine hours.

Prerequisites: 12 hours in biology, including comparative anatomy.

A formal lecture and laboratory survey of all marine chordates, including the lower subphyla, the fishes, reptiles, mammals, and shore birds.

541—**Marine Fisheries Biology.** Six hours.

Prerequisites: 18 quarter hours of zoology and one year of college mathematics.

An introduction to the general principles of the subject including the simpler statistical procedures, collection of production statistics, and a general review of the world fisheries with special emphasis on the United States.

G-454—**Marine Invertebrate Zoology.** Nine hours.

A study of the structure, natural habitats, classification and economic importance of invertebrate species native to the waters of the Mississippi Sound and around the outlying islands.

565—**Marine Microbiology.** Four hours.

Twelve hours of lecture and laboratory per week.

Prerequisite: Graduate standing in microbiology, or in marine biology with adequate microbiological background.

Examination of the microbial flora of representative environments. Taxonomy, physiology, economic significance, and effect upon biologic communities.

566—**Marine Phycology.** Credits (maximum six hours) and schedules by arrangement.

Prerequisites: Graduate standing, consent of instructor, and some familiarity with the fundamentals of both plant physiology and phycology (culture and taxonomy).

Areas of concentration according to seasonal activities and needs of interest of the student.

DEPARTMENT OF CHEMISTRY (CHE)

Robert T. van Aller, Chairman

A. Bedenbaugh J. Bedenbaugh Brent Campbell Lane
Long Newsom Pinson Thames Wertz

Master's Degree Programs

The Department of Chemistry participates in programs leading to the Master of Arts and the Master of Science degrees. For all master's degrees a minimum of forty-six (46) graduate hours is required.

The Department has the same requirements for the Master of Arts and the Master of Science degrees, so the title of the degree is optional with the student. These degrees require proficiency in a language, a minor of sixteen (16) hours, and major courses selected by the student in consultation with the department chairman or the major professor. The Department will require a qualifying examination to be taken during the first week upon entering Graduate School. The results of this examination will be used to determine any deficiencies, which will be required to be removed. The student will also be required to attend seminars each quarter of residence. The language requirement will, in most cases, be German. An acceptable problem in research must be completed and terminated by a thesis and an oral examination defending the thesis.

Doctor of Philosophy Program

The Department of Chemistry feels that the degree of Doctor of Philosophy is not to be conferred because of the successful completion of a predetermined number of credit hours but only in recognition of excellence in research and scholastic attainment. However the University requires a minimum of 118 hours beyond the bachelor's or seventy-two (72) beyond the master's degree.

The departmental requirements for the Doctor of Philosophy degree are those stated under the general requirements in this **Bulletin** plus the following:

1. The Department of Chemistry is offering majors in the fields of analytical, biochemistry, inorganic, organic, and physical chemistry.
2. A student, with faculty consent, may choose to bypass the master's degree as he proceeds toward the doctoral degree.
3. The course work required will be determined by the student and the graduate committee. The choice of the field of study shall rest with the student as shall the choice of the major professor after consultation of the student with each member of the graduate faculty.
4. One year of residence time will be allowed for the time spent in obtaining the master's degree if it is transferred from another school. Residence time is based on full-time study as determined by the Department. Only under exceptional circumstances will a student be permitted to do any of the last two years of residence at another location. The dissertation shall be presented to the major professor for correction and criticism before the end of the quarter preceding the quarter of graduation. After approval by the major professor

the candidate will circulate copies of the dissertation to his doctoral committee for correction and criticism. After the committee's approval the oral examination will be scheduled by the chairman of the doctoral committee consistent with University policy.

COURSE DESCRIPTIONS (CHE)

G-401, G-402, G-403—**Physical Chemistry.** Four hours each.

Three lecture periods and one 3-hour laboratory period per week.

Prerequisites: CHE 303, Integral Calculus, and 1 year of physics.

A mathematical treatment of the laws governing chemical and physical changes. Topics treated are chemical thermodynamics, kinetics, surface and interface phenomena, nuclear chemistry, quantum chemistry, and spectroscopy. Emphasis is placed on problem solving in each of these areas.

G-405—**Instrumental Analysis.** Five hours.

Four hours lecture and three hours laboratory or library work per week.

Prerequisites: CHE 303 and CHE 305.

May be taken simultaneously with CHE G-401 or G-402.

A course in the theory and use of analytical techniques such as colorimetry, polarimetry, ultraviolet, visible and infrared spectrophotometry, gas chromatography, mass spectroscopy, nuclear magnetic resonance, spectroscopy, etc.

G-406—**Qualitative Organic Analysis.** Five hours.

Two hours lecture and eight hours laboratory per week.

Prerequisite: CHE 303.

The systematic identification of pure organic chemicals and the analysis of mixtures, with considerable emphasis on chromatographic separation techniques and spectroscopic methods of analysis.

G-425—**Introduction to Biochemistry.** Five hours.

Three hours lectures and four hours laboratory per week.

Prerequisite: CHE 303.

Subjects discussed include proteins, enzymes, nucleic acids, biological oxidations and photosynthesis.

G-426—**Intermediary Metabolism.** Five hours.

Three hours lecture and four hours laboratory per week.

Prerequisite: G-425.

This course is designed to acquaint the student with the major metabolic cycles and pathways. Energy considerations and the interrelation of these pathways are included.

G-427—**Metabolic Control.** Five hours.

Three hours lecture and four hours laboratory per week.

Prerequisite: G-426.

The many systems of metabolic control are discussed. The role of hormones, vitamins and nucleic acids in control mechanisms are included along with a discussion of the circulatory system and the chemical basis of antibody diversity.

521—**Advanced Analytical Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 405 or permission of instructor.

This course consists of sampling techniques, equilibria and activity, chemical and physical separations, and chemical methods of analysis.

522—**Advanced Analytical Instrumentation.** Four hours.

Three hours lecture and two hours laboratory per week.

Prerequisite: CHE 521 or permission of instructor.

Theory and use of the following spectroscopy techniques are presented: Ultraviolet, visible, IR, NMR, x-ray, ESR, emission, atomic absorption and mass spectroscopy. Also included are polorography, coulometry, potential step electrolysis and electrode end point detection.

531—**Theoretical Concepts in Inorganic Chemistry.** Four hours.

Four hours lecture per week.

The course will consist of various approaches to chemical bonding and structure.

532—**Inorganic Reactions and Mechanisms.** Four hours.

Four hours lecture per week.

A systematic study of various classes of inorganic reactions.

533—**Physical Inorganic Chemistry.** Four hours.

Four hours lecture per week.

A study of acid-base concepts, solvation, thermodynamics, electrochemistry, etc.

535—**Inorganic Preparations.** Two or four hours.

One hour lecture and six or twelve hours laboratory per week.

Prerequisite: Permission of instructor.

Preparation and identification of various types of inorganic compounds.

541—**Advanced Organic Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: Successful completion of Organic Qualifying Examination or in special instances, permission of instructor.

A study of the structure of organic compounds and its relation to chemical bonding, stereochemistry, resonance concepts, and in general, the effects of structure on reactivity.

542—**Advanced Organic Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 541, or in special instances permission of the instructor.

A study designed to classify organic reaction mechanisms with respect to basic mechanisms with individual reactions selected to elucidate their scope. A comprehensive study of NMR, mass spectrometry, ultraviolet and infrared spectroscopy as related to their use in structure determinations.

543—**Advanced Organic Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 542.

A continuation of the study designed to classify organic reaction mechanisms. Much emphasis is placed on the student's ability to plan successful synthetic routes and the mechanisms involved in such transformation. Course designed to strengthen those principles established in CHE 541 and 542.

545—**Organic Preparations.** Two or four hours.

One hour lecture and six or twelve hours laboratory per week.

Prerequisite: Permission of instructor.

A course designed to familiarize the student with specialized synthetic techniques in organic chemistry not encountered at the undergraduate level and to acquaint him with large scale preparations and the equipment involved.

561, 562, 563—**Advanced Physical Chemistry.** Four hours each.

Four hours lecture per week.

A course designed to give the student a working knowledge of physical chemistry and its applications. Topics discussed are: statistical mechanics and classical thermodynamics; kinetics and absolute rate theory; group theory and symmetry applied to spectroscopy problems; potential functions; quantum mechanics and spectroscopy; introductory nuclear chemistry.

594—**Seminar.** One hour each quarter.

One hour per week.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

Prerequisite: Consultation with and permission of major professor.

621—**Spectroscopy.** Four hours.

Four hours lecture.

Prerequisite: Permission of instructor.

A detailed study of spectroscopic theory and techniques.

631—**Structure and Bonding.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 533 or permission of instructor.

This course consists of a detailed approach of chemical bonding via semi-quantum mechanical treatments such as M.O., L.C.A.O., hybrid orbitals, etc.

632—**Coordination Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 533 or permission of instructor.

A study of molecular orbital and ligand field treatments of various complexes. Emphasis on electronic and vibronic transitions.

641—**Physical Organic Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 543.

Selected topics including application of quantum mechanics to organic chemistry, use of kinetic and product studies to determine mechanisms, and use of cryoscopy, isotopes, etc., in the elucidation of structure and mechanism in organic chemistry.

642—**Mechanisms of Organic Reactions.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 543.

Principles and applications of organic chemistry relative to structure of molecules and the mechanism of organic reactions. Much emphasis is placed on newer developments as reported in the chemical literature. Stereochemistry, kinetics, and thermodynamics are topics of special interest.

645—**Polymer Chemistry I.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 543 and permission of instructor.

A study of select polymer system, polymerization mechanisms, structure-property, relationships and methods for evaluation structure-property.

646—**Polymer Chemistry II.** Four hours.

Four hours lecture per week.

Prerequisite; CHE 645.

A study of select polymer systems, polymerization mechanisms, structure-property, relationships and methods for evaluation structure-property and property structure relationships.

662—**Statistical Thermodynamics.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 563 or permission of instructor.

This course consists of statistical mechanical theory and techniques applied to the calculation and examination of thermodynamic properties. Topics encompassed are: classical mechanics, quantum mechanics, systems of independent particles, chemical equilibrium; distribution laws, partition functions, and thermodynamic functions for atomic and diatomic molecules; nuclear spin states and isotope effects; classical statistics and the kinetic theory of gases; polyatomic molecules, blackbody radiation, real gases, lattice vibrations; distribution functions and theory of dense fluids; solutions of electrolytes and the Debye-Huckel theory.

665—**Structural Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 563.

This course will consist of a theoretical treatment of structural determinations and will encompass the following: symmetry, wave mechanics, rotation, nuclear magnetic resonance, molecular vibrations, anisotropic polarization, crystal structure analysis, electron diffraction.

690—**Chemical Literature.** Four hours.

Four hours lecture per week.

Prerequisite: Permission of the instructor.

In this course, the student learns in detail how to search the literature for information related to his research. The major part of the course is concerned with information retrieval methods but discussions of general library procedures are included.

731—**Organometallic Compounds.** Four hours.

Four hours lecture per week.

Prerequisites: CHE 533 and CHE 543 or permission of instructor.

The chemistry of compounds containing carbon-metal and carbon-metalloid bonds. The preparation, structure, physical properties and chemical reactions or organometallic derivatives will be stressed along with topics of current interest in the chemical literature.

732—**Nuclear Chemistry.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: Permission of instructor.

This course consists of a study of the interactions of radiation with matter, the nature of radioactivity, radioactive decay, radiation detection, nuclear reactions, nuclear models, tracers in chemical applications, nuclear spectroscopy, nuclear processes as chemical probes, and safety in handling radioactive materials. The laboratory is devoted to radiation detection using gieger, proportional, scintillation, surface barrier, and multichannel analyzer techniques and chemical problems utilizing these detection devices. A laboratory project involving the use of radioactive tracers in chemical synthesis is required.

741—**Stereochemistry of Organic Compounds.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 543.

Basic concepts followed by a number of specialized topics including configurational correlations, conformation and reactivity, the stereochemistry of ring systems, stereochemical aspects of trivalent carbon, and optical rotatory dispersion.

743—**A Survey of Heterocyclic Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 543.

Nomenclature, synthesis, and reactions of the more common heterocylic systems are presented with the purpose of teaching fundamental facts that can be applied to the study of more complex heterocyclic systems.

744—**Organophosphorous Compounds.** Four hours.

Four hours lecture per week.

Prerequisite: CHE 543.

A study of compounds containing carbon-phosphorus bonds. The preparation, structure, physical properties, mechanism of chemical reactions and synthetic applications will be covered. Topics of current interest will be stressed.

745—**Biosynthetic Pathways.** Four hours.

Prerequisite: Permission of instructor.

Four hours lecture per week.

A course designed to acquaint the student with metabolic pathways in detail. Subjects discussed are biosynthesis of terpenes, sterols and steroid hormones.

761—**Quantum Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: Permission of instructor.

This course consists of quantum mechanical theory applied to the solution of chemical problems. The following topics are discussed: origins of quantum theory, modern wave mechanics, operators, kinetics of radiative processes, angular momentum, systems with spherically symmetrical potentials, many-electron atoms, matrix theory, methods of approximating solutions to the Schroedinger wave equation, electron spin and Pauli principle, atomic structure, group theory, molecular structure, Hartree-Fock self-consistant-field method, electronic structure of polyatomic molecules, and Pi-electron systems.

762—**Chemical Kinetics.** Four hours.

Four hours lecture per week.

Prerequisite: Permission of instructor.

A study of the experimental techniques of measuring chemical reaction rates and the mathematical treatment of rate data. Topics include reaction order; molecularity; modern rate theories; ionic, free radical and complex reaction mechanisms; homogeneous, heterogeneous and enzyme catalysis; and the study of very fast reactions.

763—**Electrochemistry.** Four hours.

Four hours lecture per week.

Prerequisite: Permission of instructor.

The theory of thermodynamics of electrochemistry, theoretical derivations of electrochemical techniques and applications thereof, will be presented.

764—**Colloid Chemistry.** Four hours.

Four hours lecture per week.

Prerequisite: Permission of instructor.

Study of the methods of preparation, properties and potential applications of two phase systems in which the dispersed phase is not dispersed to the extent of making a true solution, but is finely dispersed so that it presents such a large area of contact that surface area forces a stable equilibrium between the two phases.

791—**Research in Chemistry.** One to twelve hours.

Prerequisite: Approval of the major professor.

794—**Seminar.** One hour each quarter.

One hour per week.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF COMPUTER SCIENCE AND STATISTICS (CSS)

Danny R. Carter, Acting Chairman

Nagurney Nissan Phillippi

The Department of Computer Science and Statistics participates in the program leading to a minor in statistics at the master's level. For a minor, the student must take sixteen (16) graduate hours which should be selected from the following courses:

CSS G-415—**Methods of Mathematical Statistics I.** Four hours.

CSS G-416—**Methods of Mathematical Statistics II.** Four hours.

CSS G-425—**Experimental Design.** Four hours.

CSS G-427—**Sampling Methods.** Four hours.

CSS 535—**Probability Theory.** Four hours.

CSS 536—**Statistical Inference.** Four hours.

CSS 537—**Least Squares Techniques.** Four hours.

Students may take the following courses in the Department of Psychology and apply them to a minor in statistics:

PSY 562—**Research Methods: Descriptive Statistical Methods.** Four hours.

PSY 563—**Research Methods: Significance Tests and Experimental Designs.** Four hours.

PSY 701—**Factor Analysis.** Four hours.

Doctoral candidates may take twelve (12) hours in either statistics or computer science in lieu of a second language. Specific courses will be determined by this Department and by the student's graduate committee.

COURSE DESCRIPTIONS (CSS)

G-403—**Introduction to Analog Computers.** Four hours.
Prerequisite: MAT 378.
Design and testing of basic analog circuits.

G-404—**Advanced Analog and Hybrid Systems.** Four hours.
Prerequisite: CSS G-403.
Use of the analog computer to solve engineering problems.

G-412—**Educational Statistics.** Four hours.

Prerequisite: Permission of instructor.

Elementary probability, conditional probability, Binomial experiments, curve fitting, least squares techniques, correlation and regression models.

G-415—**Methods of Mathematical Statistics I.** Four hours.

Prerequisite: MAT 276 or permission of instructor.

Continuous and discrete distributions, moments of distributions, point and interval estimation, hypothesis testing, power of tests, analysis of variance (one-way classification, orthogonal contrasts), two-way classification analysis of variance, fixed, random and mixed models.

G-416—**Methods of Mathematical Statistics II.** Four hours.

Prerequisite: CSS G-415.

Orthogonal polynomial contrasts, multi-way classification, simple linear regression, multiple linear regression, polynomial regression, Designs (simple randomized blocks, nested factorials), intra-class correlation, quality control.

G-425—**Experimental Design.** Four hours.

Prerequisite: CSS G-416.

Factorials, randomized blocks, Latin Squares and split-plot, fractional factorials and confounding, response surface models.

G-427—**Sampling Methods.** Four hours.

Prerequisite: CSS G-416.

The planning, execution and evaluation of sample surveys. Simple random sampling, stratified random sampling, cluster sampling.

G-474—**Boolean Algebra and Switching Circuits.** Four hours.

Prerequisite: Permission of instructor.

Symbolic logic and Boolean algebra for descriptions and analysis of switching circuits, basic sequential circuits, digital systems design principles.

535—**Probability Theory.** Four hours.

Prerequisite: MAT 379.

Basic concepts in probability, properties of continuous and discrete distribution, characteristic functions, laws of convergence, transformations.

536—**Statistical Inference.** Four hours.

Prerequisite: CSS 535.

Properties of estimators, Bernoulli and Poisson processes, Cramer-Rao lower bound, power of tests.

537—**Least Squares Techniques.** Four hours.

Prerequisite: CSS 536.

Regression Analysis, Doolittle method, curvilinear regression, experimental design models.

DEPARTMENT OF GEOLOGY (GLY)

Richard L. Bowen, Chairman

B. W. Brown DeRatmiroff Hoskin Paulson

The Department of Geology participates in programs leading to the Master of Arts, Master of Science, and the Master of Education degrees in geology. For all master's degrees, a minimum of forty-six (46) graduate hours is required, twenty-four (24) of which must be in courses numbered above 500; thesis credit is not included in the twenty-four (24) hours. For the Master of Arts or the Master of Science, the student must complete an original research program and submit a thesis acceptable to the Department; a thesis committee which supervises these activities is established when the student is formally admitted to degree candidacy. In addition to the general University requirements, the student must take an evaluation examination. This examination must be taken before the student can be formally admitted to degree candidacy; it is desirable to schedule it, upon consultation with the department chairman, before initial enrollment in graduate study, but in no case may it be delayed later than the time of completion of twelve (12) hours of graduate study. The score on the advanced subject (in the area of science) on the Graduate Record Examination must be submitted prior to enrollment; no student will be admitted to candidacy for the master's degree in geology who has a score of less than 900 on the combined total of verbal and aptitude sections of the Graduate Record Examination.

Students following programs leading to the Master of Arts or the Master of Science degree in geology will be required to take a summer field course if they did not have such a course as undergraduates (this stipulation may be waived, upon application, on account of sex or physical disability). All graduate students in geology are required to attend seminars during each quarter of residence.

For the Master of Arts and the Master of Science degrees the student must take a minor of sixteen (16) hours in a field approved by the Department; for the Master of Arts degree, he must also demonstrate a reading knowledge of a language pertinent to the subject of his thesis.

For the Master of Education the student electing earth science as a subject-matter area must take a minimum of twenty-four (24) hours of graduate geology courses (up to eight hours of graduate courses in allied fields, such as geography or physics, may be substituted, if, in the opinion of the student's advisory committee, the courses fall in the category of "earth science").

The Department has a cooperative arrangement with the Gulf Coast Research Laboratory at Ocean Springs, Mississippi. Certain courses in marine geological studies may be taken at the Laboratory; these are generally taught in the summer.

COURSE DESCRIPTIONS (GLY)

G-401—**Principles of Stratigraphy.** Four hours.
Four hours lecture; week-end field trip.
Prerequisites: GLY 260, 302, 330.

G-420—**Sedimentology.** Four hours.
Two lectures and four hours laboratory per week.
Prerequisite: Permission of instructor.
Study of sedimentary materials, their formation, transportation, deposition, and lithification; field trips.

G-422—**Petroleum Geology.** Four hours.
Two lectures and four hours laboratory per week.

Prerequisites: GLY 330 and permission of instructor.
The origin, occurrence, migration, and accumulation of oil and gas.

G-430—**Elements of Geochemistry.** Four hours.
Three lectures and one laboratory per week.
Prerequisites: Consent of instructor, CHE 103 or equivalent, GLY 101.
Geochemical cycles of the atmosphere, hydrosphere and lithosphere. Concentration controls. Geochemical effects in earth history. Techniques of geochemical exploration.

G-431—**Elements of Geophysics.** Four hours.
Three lectures and one laboratory per week.
Prerequisites: Consent of instructor, MAT 103, PHY 103 (or 203), GLY 101.
Terrestrial magnetism and electricity. Gravitational field variations and measurements. Seismic reflection and refraction. Nuclear geology. Surface and subsurface measurements. Concepts and significance of geophysical variations.

G-445—**Economic Geology.** Four hours.
Two lectures and four hours laboratory per week.
Prerequisites: GLY 310, 314, and 330.
Principles of ore deposits; introduction to fuels and non-metallic mineral deposits.

G-452—**Physical Marine Geology.** Up to 9 quarter hours. Gulf Coast Research Laboratory.
Prerequisites: GLY 103, 310, and 420.
A general introduction to the physical processes at work on the shores of Mississippi Sound with emphasis on the erosional and depositional effects of waves and currents at different stages of tide.

G-453—**Chemical Marine Geology.** Up to 9 quarter hours. Gulf Coast Research Laboratory.
Prerequisites: GLY 103, 310, 420, and CHE 203.
Supervised research in the chemistry of the waters and sediments of Mississippi Sound.

G-454—**Problems in Marine Sedimentation.** Up to 9 quarter hours. Gulf Coast Research Laboratory.
Prerequisite: Permission of instructor.
Supervised study of selected aspects of marine sedimentation along the Gulf Coast.

G-461—**Petrography.** Four hours
Two hours lecture and four hours laboratory per week.
Prerequisites: GLY 311 and 314.
Systematic study of rocks by means of the polarizing microscope.

G-468—**Micropaleontology I.** Four hours.
One hour lecture and six hours laboratory per week.
Prerequisites: GLY 302 and 303.
Taxonomy, morphology, and stratigraphic use of Foraminifera.

G-469—**Micropaleontology II.** Four hours.
Prerequisites: GLY 302 and 303.
Taxonomy, morphology, and stratigraphic use of Ostracoda.

G-479—**Introductory Oceanography.** Four hours.
Prerequisites: GLY 103, PHY 103, CHE 103 or equivalents, and permission of instructor.

Techniques and results of study of the oceanic hydrosphere and its interfacial relationships with the lithosphere and atmosphere. Interdisciplinary approaches especially suitable for training in science education programs are emphasized.

502—**Stratigraphy of North America I.** Four hours.
Prerequisite: GLY 401.
Stratigraphy of the Precambrian and the Paleozoic Eras.

503—**Stratigraphy of North America II.** Four hours.
Prerequisite: GLY 401.
Stratigraphy of the Mesozioc and Cenozoic Eras.

505—**Paleoclimatology.** Four hours.
Prerequisite: Permission of instructor.
Methods of investigation of and evidence regarding the determination of climatic conditions of the past as based on the rock, mineral ,and biologic record.

511—**Pleistocene Geology.** Four hours.
Lectures and discussions.
Prerequisites:GLY 101 and permission of instructor.

Geologic history of the earth since the beginning of the Pleistocene Epoch with emphasis on glacial phenomena.

512—**Engineering Geology.** Four hours.
Lectures and discussions; field trips.
Prerequisite: Permission of instructor.
Study of earth processes and materials as they relate to engineering practice.

514—**Geology of Groundwater.** Four hours.
Lectures and discussions; field trips.
Prerequisite: Permission of instructor.
Occurrence and production of groundwater.

515—**Principles of Geology for High School Science Teachers.** Four hours.
Two hours lecture and four hours laboratory per week.
Prerequisite: Bachelor's degree in science or its equivalent.
Principles of physical and historical geology for teachers in the NSF Summer Institute. The course can not be applied toward a major or minor in geology.

516—**Survey of the Lithosphere I.** Four hours.
Three lecture and two laboratory hours per week. Field trips.
Prerequisite: Permission of instructor.
Review of observations regarding and methods of analysis of the crust of the earth. This course cannot be applied toward a major in geology; it is especially designed for participants in science education programs, but it is also open to others.

517—**Survey of the Lithosphere II.** Four hours.
Three lecture and two laboratory hours per week.
Prerequisite: Permission of instructor.
Methods of study of the earth's interior (mantle and core), procedures of investigation, concepts and theoretical foundations; hypotheses of cosmology.

530—**Advanced Structural Geology.** Four hours.
Lectures and discussions; field trips.
Prerequisite: GLY 330.
Theoretical analysis of rock deformation on a regional scale.

531—**Tectonics.** Four hours.
Prerequisite: Permission of instructor.
Examination of large-scale disturbances of the earth, stresses and strains involved, and methods of response.

532—**Structural Petrology.** Four hours.
Prerequisite: Permission of instructor.
Macroscopic and microscopic techniques of analysis of rock and mineral deformation; geological significance of such deformation.

533—**Hypotheses of Continental Drift.** Four hours.
Prerequisite: Permission of instructor.
Examination of the evidence regarding and concepts advanced with respect to large-scale crustal dislocations, with emphasis on the hypothetical former contiguity of South America and Africa.

569—**Gulf Coast Stratigraphy.** Four hours.
Lectures, discussions, and field trips.
Sediments and stratigraphic problems of the Gulf Coastal Region.

591—**Seminar.** Two hours.
Only two hours allowed toward the master's program; varied topics.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

DEPARTMENT OF MATHEMATICS (MAT)

Porter G. Webster, Acting Chairman

Felder King Maples C. Ratcliff R. Ratcliff

The Department of Mathematics offers programs leading to the Master of Arts, Master of Science, and Master of Philosophy degrees with a major in mathematics. In cooperation with the College of Education and Psychology, the Master of Education, and the Doctor of Education degrees are offered.

For all master's degrees, a minimum of forty-six (46) quarter hours of graduate work is required, twenty-four (24) quarter hours of which must be in courses numbered above 500.

For the Master of Arts degree, the student must demonstrate proficiency in a foreign language (by examination or by presentation of sufficient undergraduate credit), and write a thesis.

For the Master of Science degree, proficiency in a foreign language is not required. The writing of a thesis is optional with the student's advisory committee.

A mathematics seminar is conducted each quarter for graduate students in mathematics. Its purpose is to contribute to the student's mathematical development. Each graduate student in residence is required to attend the mathematics seminar each quarter. A maximum of six (6) quarter hours credit may be earned for participation in the seminar.

The three-quarter sequence in advanced calculus should be completed before beginning the programs leading to the Master of Arts or the Master of Science degree. If not, then it must be included as a part of the program approved by the student's adviser.

A student must satisfy the present undergraduate requirements for a major in mathematics at the University of Southern Mississippi before beginning a program leading to a master's degree in mathematics. If a student cannot meet these requirements, he may be admitted to the Graduate School as a conditional graduate student and allowed to take work to fulfill these requirements. The hours required for a graduate degree will be in addition to this prerequisite. It should be emphasized that admission to the Graduate School does not imply acceptance of the student as a candidate for a graduate degree.

Graduate students in mathematics are required to pass an oral preliminary examination before being admitted to candidacy for a master's degree. The preliminary examination will cover fundamentals and will serve to identify the student's level of mathematical maturity. No student will be granted more than three attempts to pass the preliminary examination with at least a three-month interval between attempts. This examination will be administered not later than the fourth week of any quarter on a date arranged by the student with the student's adviser and the chairman of the Mathematics Department. A minimum of twenty (20) quarter hours of graduate courses must be registered for and completed after the examination is passed.

Candidates for either the Master of Arts or the Master of Science degree will take an oral comprehensive examination not later than the sixth week of the last quarter of residence on a date arranged by the student with the student's adviser and the chairman of the Mathematics Department.

No student will be permitted to select a thesis topic until he has been admitted to candidacy for a master's degree. The thesis in mathematics must conform to University regulations. Four copies of the candidate's thesis are required to be distributed as follows: two copies to the Dean of the Graduate School, one copy to the chairman of the Mathematics Department, and one copy to the student's major professor.

All other University requirements for the master's degree as outlined in the **Graduate Bulletin** must be completed.

The offerings of the Mathematics Department are divided into the following four areas:

(1) **Mathematical Analysis**—G415, G425, G431, G435, G441, G442, G443, 505, 506, 507, 531, 533, 534.

(2) **Algebra**—G423, G424, G426, G472, 503, 572.

(3) **Applied Mathematics**—G411, G415, G416, G418, G425. G426, G431, G435, G441, G442, G443, 505, 506, 507, 531, 551, 552, 631.

(4) **Geometry and Topology**—G401, G471, G472, G473, 501, 571, 572, 601, 671.

The Department of Mathematics offers the following areas of study, which may be taken on the Doctor of Education program with emphasis in mathematics, or to fulfill requirements of one year's work in mathematics beyond the master's degree:

MAT G-441, G-442, G-443. **Advanced Calculus I, II, III.** Twelve hours.

MAT G-415, 505, 506, 507. **Differential Equations.** Sixteen hours.

MAT G-423, G-424, 503. **Modern Algebra I, II, III.** Twelve hours.

MAT G-471, G-473, 583. **Topology I, II, III.** Twelve hours.

MAT G-431, 531, 631. **Functions of a Complex Variable I, II, III.** Twelve hours.

MAT 532, 533, 534. **Functions of a Real Variable I, II, III.** Twelve hours.

MAT 551, 552, 553. **Applied Mathematics I, II, III.** Twelve hours.

COURSE DESCRIPTIONS (MAT)

G-318—**Basic Concepts of Mathematics for Elementary School Teachers.** Four hours.

Prerequisite: MAT 100 or its equivalent.

Graduate credit is applicable only towards a master's degree in education earned in an in-service course.

G-401—**Geometry.** Four hours.

Prerequisites: MAT 341 and MAT 409 or secondary school geometry.

G-406—**Numerical Analysis I.** Four hours

Prerequisite: MAT 379.

Graduate credit only for non-mathematics majors.

G-407—**Number Theory.** Four hours.

Prerequisite: MAT 341.

Graduate credit only for non-mathematics majors.

G-409—**Mathematics for Teachers of Junior High School Mathematics.** Four hours.

Prerequisites: MAT 100 and MAT 318.

Open only to elementary education majors or may be used as an elective for mathematics majors.

G-411—**Vector Analysis.** Four hours.

Prerequisite: MAT 378.

G-415—**Introduction to Differential Equations II.** Four hours.
Prerequisite: MAT 405.

G-416—**Numerical Analysis II.** Four hours.
Prerequisites: MAT 405 and 406.

G-418—**Linear Programming.** Four hours.
Prerequisite: MAT 326.

G-420—**Statistics and Probability.** Four hours.
Prerequisite: MAT 341.
Graduate credit only for non-mathematics majors.

G-423—**Modern Algebra I.** Four hours.
Prerequisite: MAT 341.

G-424—**Modern Algebra II.** Four hours.
Prerequisite: MAT 423.

G-425—**Fourier Series.** Four hours.
Prerequisites: MAT 326 and MAT 405.

G-426—**Linear Algebra II.** Four hours.
Prerequisite: MAT 326.

G-431—**Functions of a Complex Variable I.** Four hours.
Prerequisite: MAT 379.

G-435—**Laplace Transform.** Four hours.
Prerequisite: MAT 405.

G-441—**Advanced Calculus I.** Four hours.
Prerequisites: MAT 341 and MAT 379.

G-442—**Advanced Calculus II.** Four hours.
Prerequisite: MAT 441.

G-443—**Advanced Calculus III.** Four hours.
Prerequisite: MAT 442.

G-471—**General Topology.** Four hours.
Prerequisite: MAT 341.

G-472—**Algebraic Topology.** Four hours.
Prerequisites: MAT 424 and 471.

G-473—**Metric Spaces.** Four hours.
Prerequisite: MAT 471.

501—**Differential Geometry I.** Four hours.
Prerequisite: MAT 411.

503—**Modern Algebra.** Four hours.
Prerequisite: MAT 424.

505—**Differential Equations I.** Four hours.
Prerequisites: MAT 443 and 405.

506—**Differential Equations II.** Four hours.
Prerequisite: MAT 505.

507—**Differential Equations III.** Four hours.
Prerequisite: MAT 506.

531—**Functions of a Complex Variable II.** Four hours.
Prerequisite: MAT 431.

532—**Functions of a Real Variable I.** Four hours.
Prerequisite: MAT 443.

533—**Functions of a Real Variable II.** Four hours.
Prerequisite: MAT 532.

534—**Functions of a Real Variable III.** Four hours.
Prerequisite: MAT 533.

551—**Applied Mathematics I.** Four hours.
Prerequisite: MAT 443.

552—**Applied Mathematics II.** Four hours.
Prerequisite: MAT 551.

553—**Applied Mathematics III.** Four hours.
Prerequisite: MAT 552.

571—**General Topology II.** Four hours.
Prerequisite: MAT 471.

581—**Topics in Algebra.** Four hours.
Prerequisites: MAT 424 and permission of the instructor.

582—**Topics in Analysis.** Four hours.
Prerequisites: MAT 443 and permission of instructor.

583—**Topics in Topology and Geometry.** Four hours.
Prerequisites: MAT 401 or 471 and permission of the instructor.

591—**Research in Mathematics.** One to twelve hours.

594—**Mathematics Seminar I, II, III.** One hour each.
Prerequisite: Permission of instructor.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

631—**Functions of a Complex Variable III.** Four hours.
Prerequisite: MAT 531.

694—**Mathematics Seminar I, II, III.** One hour each.
Prerequisite: Permission of instructor.

DEPARTMENT OF MICROBIOLOGY (MIC)

Brundage Stocks Yarbrough

Any student having successfully completed a Bachelor of Science or Bachelor of Arts degree in any of the biological or physical sciences and who meets the requirements set forth by the Graduate School of the University of Southern Mississippi is eligible to pursue a program leading toward the Master of Science or Doctor of Philosophy degree in the Department of Microbiology. The Department of Microbiology endeavors to prepare students for teaching and/or research positions in industrial and medical microbiology and in genetics.

MASTER'S DEGREE PROGRAM

The Department of Microbiology will require a qualifying examination to be taken during the first week upon entering Graduate School. The results of this examination will be used to determine any deficiencies the student may possess which will be required to be removed. A minimum of forty-six (46) graduate hours is required, sixteen (16) of which must be in an approved minor area of science. An acceptable problem in research must be completed and terminated by a written and/or oral comprehensive examination.

DOCTOR OF PHILOSOPHY PROGRAM

The Doctor of Philosophy degree in the Department of Microbiology is considered foremost to be a research degree; however, a student must demonstrate excellence in scholastic attainments as well as research capabilities. The University requires a minimum of one hundred and eighteen (118) hours beyond the bachelor's or seventy-two (72) hours beyond the master's degree. The Department of Microbiology requires one foreign language and proficiency in statistics as set forth by the Graduate Council.

During a student's first or second quarter of enrollment, the Department will require a written and/or oral qualifying examination. A written and/or oral comprehensive examination must be taken at or near completion of the candidate's course work. Upon acceptance of the dissertation by the candidate's committee and at least four weeks prior to graduation, a final oral examination in defense of the candidate's dissertation will be administered by the Department of Microbiology. The Department furthermore requires that the candidate's research results be of a quality to be accepted for publication by a scholarly scientific journal.

COURSE DESCRIPTION (MIC)

G-405—**Pathogenic Microbiology.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisite: MIC 339 and 340 and consent of instructor.

Schemes for isolation and identification of major groups of disease producing organisms.

G-420—**Soil Microbiology.** Four hours.

Two hours lecture and two 2-hour laboratory periods per week.

Prerequisites: MIC 339, 340, and organic chemistry, or consent of instructor.

Study of soil microflora, emphasis on Nitrogen-Carbon cycle in environment.

G-428—**Advanced Genetics.** Four hours.

Prerequisites: BIO 101, 102, 401.

A continuation of BIO 401. Study of phenotypic effects of genes, of radiations and other mutagens, population genetics, speciation, microbial genetics, and regulations of gene motion.

G-436—**Interpretation of Biological Data.** Four hours.

Prerequisites: MAT 103, BIO 401.

Techniques applicable to the design and interpretations of biological research data.

G-440—**Physiological Genetics.** Four hours.

Prerequisite: BIO 401.

Recent advances in physiological genetics. Attention will be directed to literature on the nature of genes and to the interaction of heredity and environment in the expression of the characteristics of higher organisms.

G-441—**Microbiology of Water and Sewage.** Four hours.

Two hours lectures and two 2-hour laboratory periods per week.

Prerequisites: MIC 339, 340, and organic chemistry, or consent of instructor.

Control of purity water supply: sources and types of pollution and control of sewage disposal.

G-442—**An Introduction to Clinical Instrumentation.** Four hours.

This course is particularly designed for the advanced medical technologists, to familiarize them with instrumental procedures commonly encountered in modern medical technology. Particular emphasis will be placed on spectrophotometry (visible and UV determinations), flame photometry, and fluorescent antibody techniques.

G-444—**Advanced Microbiolgoy Techniques.** Four hours.

Two hours lecture and four hours laboratory per week.

Prerequisites: MIC 339, 340, and organic chemistry, or consent of instructor.

Special emphasis is placed on microbiological techniques beyond the scope of MIC 340.

G-447—**Advanced Pathogenic Microbiology.** Four hours.

Prerequisite: MIC 405.

Continuation of MIC G-405, on an advanced level; schemes for isolation and identification of major groups of disease producing organisms.

G-471—**Immunology and Serology.** Four hours.

Two lectures and two 2-hour laboratory periods per week.

Prerequisite: MIC G-405.

Studies of infection, resistance, types of immunity, hypersensitivity, and major techniques of diagnostic immunological reactions.

G-492—**Microbiological Problems I, II, III.** Two hours each.
Given only by special arrangement.
A course in special techniques, designed for majors with a need for certain basic microbiological techniques as tools for future research.

506—**Microbial Physiology.** Four hours.
Two hours lecture and two 2-hour laboratory periods per week.
Prerequisites: MIC 339, 340, and organic chemistry.
Introduction to concepts of microbial nutrition, metabolism, adaptation and genetics as related to growth and environment.

508—**Medical Mycology.** Four hours.
Four hours lecture per week.
Prerequisite: BIO G-425.
Consideration of the fungi of medical significance.

539—**Industrial Microbiology.** Four hours. Two quarter course.
An intensive study of yeasts, molds, and bacteria as they are applied in the production of amino acids, vitamins, steroids, enzymes, and organic acids and alcohols.

540—**Industrial Microbiology.** Four hours.
Continuation of MIC 539.

554—**Dynamics of Experimental Populations.** Four hours.
Prerequisites: BIO 401-G401, MIC 428-G428, or permission of instructor.
Review of concepts associated with phylogeny with particular attention to factors associated with changes in population structure leading to the formation of species.

570—**Principles of Immunochemistry.** Four hours.
Prerequisite: MIC 471.
A study of the chemistry of antigens, antibodies and complement and the mechanism of their interaction. Advanced techniques and methods involved in the study of antigen-antibody reactions with emphasis on the quantitative aspects of serological reactions.

571—**Immunohematology.** Four hours.
Prerequisite: MIC 471.
A study of the serology, genetics and anthropological aspects of human blood groups, isoantigens and antibodies.

589—**Cytogenetics.** Four hours.
Two hours lecture and four hours laboratory per week.
Prerequisite: Consent of instructor.
Relationships between cytological and genetic systems.

592—**Special Problems in Microbiology I, II, III, IV.** Two hours each.
Prerequisite: A thorough background in microbiology.
Individuals will be assigned some specific problem in microbiology to investigate under faculty direction. Credit will be determined by the quality and quantity of work done varying from two to maximum of eight hours.

596—**Microbiology Seminar I, II, III.** One hour each.
The presentation and defense of current, classical concepts and principles of microbiology.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actviely working on a thesis and consulting with the major professor or making use of the library or other University faciliites must enroll in this course.

598—**Thesis.** Six hours.

601—**Research in Microbiology.** Credits to be arranged for maximum of eight quarter hours.

792—**Special Problems.** Four hours.

797—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF PHYSICS (PHY)

William E. Hughes, Chairman

Dana Folse Wood

A program of study leading to the degree of Master of Science is offered in physics. In addition to satisfying the general admission requirements of the Graduate School, students who plan to do graduate work are expected to take the advanced physics part of the Graduate Record Examination.

A minimum of forty-six (46) graduate hours is required for the master's degree. A minimum of thirty (30) graduate hours is required in physics, with the remaining hours to be selected from some related field approved by the Department. A thesis is required.

COURSE DESCRIPTIONS (PHY)

G-443—**Sound and Ultrasound.** Four hours.
Three hours lecture and one 3-hour laboratory period per week.
Prerequisites: PHY 103 or PHY 203, PHY 332 or PHY 481.
A study of sound and ultrasound, fundamentals of wave motion in a finite medium. Fundamentals of hearing, acoustics, and high intensity waves.

G-444—**Fundamentals of Solid State Physics.** Four hours.
Three hours lecture and one 3-hour laboratory period per week.
Prerequisite: Permission.
Study of the solid as an electromagnetic wave medium, excitation levels, and the one electron theory.

G-450, G-451—**Mechanics.** Four hours each.
Prerequisites: PHY 103 or 203 and calculus.
The mathematical analysis of the dynamics of particles, rigid bodies, wave motion and vibration. For physics and mathematics majors only

G-474—**Quantum Mechanics I.** Four hours.
Four lectures per week.
Prerequisites: PHY 481, MAT 405.
Thermal Radiation and the origin of Quantum Theory. The Solution of the Schroedinger Wave Equation—applied to square well potential box; particle in a central field.

G-475—**Quantum Mechanics II.** Four hours.

Four lectures per week.

A continuation of PHY G-474.

The superposition of states. Steady State Perturbation—non-degenerate and degenerate cases. Time Dependent Perturbation. Dirac wave equation.

G-481—**Nuclear Physics.** Four hours.

Prerequisite: PHY 381.

Nuclear binding forces, chain reaction, criticality, the non-steady state reactor, radiation shielding and detection.

G-485, G-486— **History and Literature of Physics.** Four hours each.

A survey of the history of physics from ancient times to 1900, stressing the rise and fall of concepts.

A survey of the influence of the concept of quanta and relativity and the modern laboratory findings which impinge upon these theories. Survey of the coding, storage, and retrieval of scientific information.

504—**Critique of Theory.** Four hours.

A critical review of the assumptions and mathematical procedures which make up what is termed "Theoretical Physics".

510 and 511—**Advanced Atomic and Molecular Spectra I and II.** Four hours each.

The detailed study of the spectra generated by high purity crystals under the influence of strong electric and/or magnetic fields at temperatures of liquid nitrogen and liquid helium.

561, 562, 563—**Modern Physics.** Four hours each.

Prerequisites: Consent of instructor and PHY 481.

Electromagnetic waves, electron emission, X-radiation, relativity, quantum theory, spectroscopy, wave mechanics, atomic and nuclear structure, and cosmic rays.

571, 572, 573—**Theoretical Physics.** Four hours each.

Prerequisite: Permission.

Selected topics of general physics from an advanced point of view. Generally mathematical development of basic physical concepts.

591—**Research in Physics.** One to twelve hours.

594—**Seminar I, II, III, IV.** One hour each.

Prerequisite: Consent of the chairman of the department.

This course will be devoted to the study of current literature in physics and may be supplemented by laboratory research. The student will prepare and deliver one or more papers before the Department.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

DEPARTMENT OF SCIENCE EDUCATION (SCE)

Bobby N. Irby, Chairman

F. Brown I. Brown Craven Flowers Sonnier

The Department of Science Education recognizing the increased emphasis on the art of science teaching and the additional opportunities for individuals with advanced training in these arts provides a program for the Master of Education and the Doctor of Education degrees in science education.

In addition to the general requirements and procedures pertaining to graduate degrees as outlined in Part III and IV of this **Bulletin,** the following requirements must be fulfilled.

Master's Degree:

1. Completion of fifty-eight (58) or sixty (60) quarter hours of graduate work.
2. A miniumum of twenty-four (24) quarter hours in a specific science —biology, chemistry, geology, or physics.
3. A minimum of eight (8) quarter hours in related sciences.
4. Demonstration of competence in the following Professional Education areas:
   (a) Psychology of learning
   (b) History and philosophy of education
   (c) Statistical methods and procedures in education
   (d) Research methods in education
   (e) Guidance and educational testing
   (f) Public school science curriculum
   (g) Problems in science teaching

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty (20) quarter hours in professional education.
B. Thirty-eight (38) to forty-eight (48) quarter hours in the sciences and science education.

Approximately one-third of the graduate work will be in professional education and two-thirds in the sciences. Students with sufficient background are not required to take additional courses in professional education, but will complete their programs in the sciences.

A thesis carrying six quarter hours is optional and would substitute for two courses in education. The total program with thesis requires fifty-eight (58) quarter hours graduate credit. The thesis may involve research in a particular science or research education.

Doctor of Education Degree:

1. Completion of seventy-two (72) quarter hours of graduate work above that accepted at the master's level.
2. A minimum of twenty-four (24) quarter hours in a specific science—biology, chemistry, earth science, or physics.
3. A minimum of eight (8) quarter hours in related science.
4. Competence in the areas of professional education as listed above.

Generally, the fulfillment of the above requirements will involve:

A. Twelve (12) to twenty-four (24) hours in professional education.
B. Thirty-two (32) or more hours in the sciences.
C. Twelve (12) or more hours in science education.

In all, two-thirds or more of the graduate work will be in the sciences and science education. In planning the overall program consideration is given to the student's background and his particular interests and goals.

Additional requirements include demonstrated proficiency in educational statistics and independent research. Research, culminating in a dissertation, may deal with a problem in the student's science specialty or a problem in science education.

In addition to an evaluation of the student's record, tests and examinations are used for diagnostic purposes in planning programs. The Graduate Record Examination verbal and quantitative scores and the National Teacher Examinations commons and teaching area scores should be submitted with the application for advanced graduate study. During the first or second quarter of study additional tests are administered by the Department and the College of Education and Psychology.

COURSE DESCRIPTIONS (SCE)

SCE G-400—BSCS—**Biology for Secondary Teachers.** Four hours.
Six hours lecture - laboratory work **per week.**
Prerequisite: Biology background or permission of the instructor.
A detailed critical examination of the subject matter, techniques, and methods for teaching biology in secondary schools, as proposed by the Biological Sciences Curriculum Study. Designed to orient teachers in modern biology subject matter and special techniques by presenting background material and special laboratory exercises. Emphasis is placed on the laboratory as the source of information from which sound conclusions can be drawn.

SCE G-401-CHEM—**Chemistry for Secondary Teachers—Methods and Techniques.** Four hours.
Two hours lecture and four hours laboratory work per week.
Prerequisite: Chemistry background or permission of the instructor.
A course designed to familiarize chemistry teachers with the materials, methods, and techniques of teaching chemistry developed by the Chemical Education Material Study Committee. Unifying principles of chemistry are emphasized, with laboratory work providing the basis of development. Not allowable as credit toward degree requirements for chemistry majors.

SCE G-402—**PSSC Physics for Secondary Teachers—Methods and Techniques.** Four hours.
Two hours lecture and four hours laboratory work per week.
Prerequisite: Physics background or permission of the instructor.
A course designed to familiarize physics teachers with methods, materials, and techniques of teaching physics developed by the Physical Science Study Committee. Not allowable as credit toward degree requirements for physics majors.

SCE G-403—**Earth Science for Intermediate School Teachers.** Four hours.
Six hours lecture-laboratory work per week.
Prerequisite: Earth Science background or permission of the instructor.
A course designed to familiarize teachers with the materials, methods, and techniques developed by the Earth Sciences Curriculum Project. Emphasis is placed on laboratory and field work for data collection, and principles of other sciences as they relate to the study of the earth.

SCE 500—**Science Curriculum in the Public Schools.** Four hours.
Prerequisite: Permission of the instructor.
Involves a critical examination of the research, its implications, and trends in science course content. Course will include the use of seminars, research problems, independent study, advanced courses, etc., in the secondary schools.

SCE 501—**Problems in Science Teaching.** Four hours.
Prerequisite: Permission of the instructor.
A study of problems related to curriculum, methodology, activities, professionalism—scientific and educational, and evaluation in science teaching. Involves the examination of recent research in these areas.

SCE 502—**Techniques of Demonstrating and Experimenting with Scientific Principles.** Four hours.

Prerequisite: Permission of the instructor.

A course designed especially for general science teachers, considering fundamental aspects of biology, chemistry, geology, and physics. Provides for examination of modern material, equipment, and apparatus, and the use of the material in demonstrating and experimenting with scientific ideas.

SCE 510—**Physics for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

The physics course is designed principally for the purpose of providing teachers with a deeper knowledge of matter and energy and understanding of their relationships. The course is organized around principles and general ideas (and their development) that can be directly applied to the elementary grade. Particular attention is given to quantitative processes pertaining to the understanding of the properties of matter and energy.

SCE 511—**Chemistry for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

In keeping with the current trends in chemistry teaching, major emphasis in this chemistry course will be placed upon: (1) relating ideas and facts; (2) understanding widely applicable principles; (3) placing heavy reliance upon laboratory work; (4) striving toward closer continuity between subject matter and pedagogy; and (5) deriving the necessary operational and conceptional definitions necessary to think about chemical systems. There will be a shift of emphasis from descriptive chemistry toward chemical principles to represent the changes in chemistry that have taken place over the last two decades.

SCE 512—**Biology for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

A course in general modern biology emphasizing the molecular aspects of animate matter.

SCE 513—**Earth Sciences for Elementary School Teachers.** Four hours.

Prerequisites: 8 hours in physical science and 8 hours in biological science.

This course is designed to provide elementary teachers with a general background understanding of natural phenomena of the earth and its relationships in space. Particular emphasis is placed on those processes that are directly applicable to grades 1 through 6.

SCE 598—**Thesis.** Six hours.

SCE 791—**Research in Science Education.** One to twelve hours.

SCE 796—**Seminar.** Two hours each quarter for no more than three quarters. Meets for two hours weekly.

Discussion of current trends and practices in science education; invited speakers; and discussions of prospecti and research of current students in science education.

SCE 797—**Independent Study and Research.** Hours arranged. Not to be counted as credit toward degree.

Students who are not in residence but who are actively working on a dissertation and counsulting with the major professor or making use of the library or other University facilities must enroll in this course.

SCE 798—**Dissertation.**

SCHOOL OF BUSINESS ADMINISTRATION

Joseph A. Greene, Jr., Dean

Howard O. Jackson, Assistant Dean

Henry A. Gottleber, Coordinator of Graduate Studies

DEPARTMENTS AND GRADUATE DEGREE PROGRAMS

The School of Business Administration currently offers the following graduate degree programs: a Master of Business Administration and a Master of Science or Master of Arts in Economics. The curricular requirements for each of these programs are detailed below, followed by graduate level course descriptions for each of the five departments within the School.

A prospective student should examine each degree program carefully as to its objective, course content, and prerequisites before deciding which to pursue.

Graduate fellowships are available in each of the degree program areas or fields of emphasis within the Master of Business Administration. Students with good undergraduate records are encouraged to apply for these at the time they apply for admission to the Graduate School. Ordinarily the student must have achieved a 3.0 average on his last two years of undergraduate work to be eligible.

GRADUATE DEGREE REQUIREMENTS

All of the general academic regulations and requirements outlined in Part IV of this **Bulletin** apply to students pursuing graduate work in the School of Business Administration. Specific requirements regarding prerequisites and courses are detailed under the outlined programs which follow. An applicant for admission who may be deficient in quality-point average or in his prerequisites may be admitted conditionally upon recommendation of his major professor, the Dean of the School of Business Administration, and the Dean of the Graduate School. If he is in doubt he may make regular application and will be notified if his admission is regular or conditional, or if it is denied.

DEGREE PROGRAMS IN BUSINESS ADMINISTRATION

MASTER OF BUSINESS ADMINISTRATION

The program leading to the Master of Business Administration degree may be used by the student in various ways. First, he may consider it as preparatory graduate work for the doctoral degree. Second, he may use it to prepare to teach in junior colleges where a teaching certificate is not necessary. Third, it may be considered as a terminal degree if he wishes to prepare for a position of responsibility in business but is not interested in advanced graduate work at the doctoral level. Many students with undergraduate work in other fields such as mathematics or engineering use the program for this last purpose as well as those who majored in business or economics as undergraduates.

The requirements for the Master of Business Administration degree may be completed in an academic year by the student who has graduated from an approved curriculum in a department or school of business and is exceptionally strong academically. Ordinarily the student spends a full calendar year completing the requirements.

The student who did his undergraduate work in some other field will have to spend additional time making up his deficiencies. Courses which are considered as definite prerequisites to the program are principles of accounting, principles of economics, and at least one course in each of the following fields: management, marketing, business law, business finance, and statistics. The major professor may ascertain other deficiences upon examination of a transcript.

A student who is deficient in these requirements or others may be allowed to remove the deficiency while doing graduate work if the deficiency is not too great.

A field emphasis may be taken in accounting, economics, finance, management, or marketing. A student who uses one of the curriculum courses in his field emphasis must substitute an acceptable course over 500 in another field in the curriculum.

The degree will be conferred upon candidates who (1) meet the general requirements of the Graduate School, (2) complete the special curriculum requirements as outlined below, and (3) pass an oral and/or written examination. A thesis is optional.

CURRICULUM REQUIREMENTS

	Hours
*ACCOUNTING 525 — Managerial Accounting	4
*ECONOMICS 515 — Managerial Economics	4
**ECONOMICS 520 — Quantitative Analysis for Decision Making	4
FINANCE 580 — Seminar in Finance	4
FINANCE 585 — Business Environment	4
MANAGEMENT 525 — Human Relations in Business	4
MANAGEMENT 570 — Business Policy	4
*MARKETING 535 — Seminar in Marketing	4
FIELD EMPHASIS	8
ELECTIVES OR THESIS	6
	46

*A student taking a major emphasis in accounting, economics, or marketing will make a proper substitution to the course in his department upon advice of his chairman.

Management 515, **Operations Research, may be substituted, especially by those students taking a field emphasis in management.

MASTER OF ARTS OR MASTER OF SCIENCE IN ECONOMICS

The Department of Economics offers a program leading to a Master of Arts with a major in economics and a program leading to a Master of Science with a major in economics. The purpose of both programs is to prepare students for positions as economists in education, business, and government.

Under either program, the student must meet the general requirements of the Graduate School. There is no language requirement for a Master of Science degree and the thesis is optional with the student. A student pursuing the Master of Arts degree must demonstrate a proficiency in an

approved foreign language and must also successfully complete an approved research project as evidenced by an accepted thesis. The specific requirements for the two degrees are listed below.

The recommended graduate minor in economics constitutes a systematic study of the economic environment in which we live. Several advanced undergraduate courses which have been designed to provide appropriate instruction in economics to students in other major fields may be taken for graduate credit.

In order to promote scholarship, fellowship, and the advancement of economics, all graduate students are encouraged to participate in the activities of the Economics Society, a student organization sponsored by the Department. Graduate students who qualify may be offered membership in Omicron Delta Epsilon (Artus), the national honorary economics society.

The recommended graduate minor in economics consists of Economics 500, 505, 510, and 530 or 550.

CURRICULUM REQUIREMENTS

	Hours
ECONOMICS 500—**Microeconomic Theory**	4
ECONOMICS 505—**Macroeconomic Theory**	4
ECONOMICS 510—**Monetary Theory and Fiscal Policy**	4
ECONOMICS ELECTIVES	12
MINOR REQUIREMENTS	16
ELECTIVES OF THESIS	6
(Thesis is optional for Master of Science only)	46

COURSE DESCRIPTIONS

DEPARTMENT OF ACCOUNTING (ACC)

Jerold J. Morgan, Chairman

Anderson Carpenter Cooley Cummings
Dear Estes Jackson Kenamond

G-405—**Current Accounting Theory and Research.** Four hours.
Prerequisites: ACC 401, 402, 409, 429, or consent of instructor.
The study of current accounting problems, with special emphasis on the published bulletins (pronouncements) of professional accounting organizations.

G-410—**Auditing II.** Four hours.
Prerequisite: ACC 409.
A study of the principles and philosophy of auditing.

G-420—**Advanced Cost Accounting and Budgeting.** Four hours.
Prerequisite: ACC 320.
A study of the development of accounting data for managerial use, including budgetary procedures and control.

G-429—**Federal Income Tax Accounting I.** Four hours.
Prerequisite: ACC 301 or consent of instructor.
An introductory course of income tax concepts applicable principally to individuals.

G-430—**Federal Income Tax Accounting II.** Four hours.

Prerequisite: ACC 429.

A continuation of ACC 429 with emphasis on research in taxation and guides for partnerships, estates, trusts, and corporations.

G-450—**Accounting Systems.** Four hours.

Prerequisite: ACC 409.

A study of the nature and procedure of systems work with attention given to the design and use of mechanical and computer oriented accounting systems.

G-460—**Consolidated Statements and Accounting for Fiduciaries.** Four hours.

Prerequisite: ACC 402 or consent of instructor.

An in-depth study of fiduciary accounting principles and reports, parent and subsidiary accounting including consolidations and mergers and foreign exchange.

G-470—**Municipal and Governmental Accounting.** Four hours.

Prerequisite: ACC 202.

An in-depth study of the principles and standards of governmental accounting, with emphasis on classification of accounts, fund accounting, statements, and reports.

G-492—**Research in Accounting Problems.** One to four hours.

Prerequisite: Approval of instructor.

A seminar course for advanced study in problems in cost accounting, budgeting, auditing, income tax, or governmental accounting.

505—**Advanced Accounting Theory.** Four hours.

Prerequisites: 20 hours of accounting above accounting principles.

An extensive study of financial accounting literature including current areas of controversy.

510—**Advanced Problems in Public Accounting Practice.** Four hours.

Prerequisite: 20 hours of accounting above accounting principles including ACC 409 or equivalent.

A study of current topics in public accounting practice.

520—**Advanced Cost Accounting Problems and Controllership.** Four hours.

Prerequisite: 20 hours of accounting above accounting principles including ACC 320 or equivalent.

A study of the evolution of cost concepts and the controllership functions with emphasis on the current role of costs in managerial planning, control, and policy making.

525—**Managerial Accounting.** Four hours.

Prerequisite: Principles of Accounting.

A study of the potential managerial uses of accounting information for planning and control.

(Not to be taken by accounting emphasis students.)

530—**Tax Planning and Research.** Four hours.

Prerequisites: ACC 429 and 430 or equivalent.

A study of tax planning and reporting, the library of tax services, preparation of tax briefs, and client representation.

DEPARTMENT OF ECONOMICS (ECO)

Kenneth R. Grubbs, Chairman

Black Cameron Greene McQuiston
Whitsell Williams Wimberly

G-400—**Public Finance.** Four hours.

Prerequisite: ECO 255-256.

A study of federal and state spending and fund raising policies within the context of the social goals to be accomplished by such policies.

G-405—**Quantitative Analysis in Economics I.** Four hours.

Prerequisite: ECO 335 or 340 or consent of instructor.

Usually offered in alternate years.

A survey of mathematical concepts particularly suited for their application in economic theory of consumer behavior and theory of the firm.

G-406—**Quantitative Analysis in Economics II.** Four hours.

Prerequisite: ECO 405.

Usually offered in alternate years.

Design, estimation, and testing of mathematical models in economic theory, with emphasis on microeconomics.

G-420—**Economics of Public Utilities.** Four hours. Usually offered in alternate years.

Prerequisite: ECO 255-256.

A study of the development, institutional bases, structure, and regulation of public utilities

G-430—**Economics of Urban Areas.** Four hours. Usually offered in alternate years.

Prerequisite: ECO 255-256 or consent of instructor.

A study of the economic problems of urban areas, with special reference to the problem of urban land utilization and the spending and fund-raising problems of municipal governments.

G-435—**International Trade Theory.** Four hours.

Prerequisite: ECO 340-345.

A study of the historical development of international trade theory, the importance of international trade, the mechanism of internal payments and modern theories dealing with the subject.

G-436—**International Economic Relations.** Four hours.

Prerequisite: ECO 435 or consent of the instructor.

A study of the problems and policies arising out of international economic relations and practices.

G-440—**Economic Development.** Four hours.

Prerequisite: ECO 255-256.

A study of the nature, causes, and effects of regional and national economic development.

G-460—**Fiscal Theory.** Four hours. Usually offered in alternate years.

Prerequisite: ECO 345.

A study of the theoretical bases for governmental fiscal operations.

G-470—**Comparative Economic Systems.** Four hours.

Prerequisite: ECO 255-256.

A course designed to acquaint the student with the origins, development, and characteristics of fascism, socialism, communism, and capitalism.

500—**Microeconomic Theory.** Four hours.

Prerequisite: ECO 340.

An advanced study of the theory of price.

505—**Macroeconomic Theory.** Four hours.

Prerequisite: ECO 345.

An advanced study of the theories of income and employment, general equilibrium, and growth.

510—**Monetary Theory and Fiscal Policy.** Four hours.

Prerequisite: ECO 330.

An advanced study of the determination of the level of prices and of alternative monetary and fiscal policies in the light of social goals.

515—**Managerial Economics.** Four hours.

An advanced study involving theory and actual cases in the application of economic analysis to the solution of business problems.

520—**Statistics for Quantitative Analysis.** Four hours.

Prerequisites: ECO 301 and 302, or equivalent.

The application of statistical procedure to business problems.

530—**History of Economic Thought I.** Four hours.

A study of the development of economic theories from Aristotle through the critics of the classical tradition.

531—**History of Economic Thought II.** Four hours.

A study of economic doctrines from the marginal revolution to Keynes. (Non-economic majors are advised to take Economics 531 rather than 530.)

550—**Problems in Political Economy.** Four hours.

Prerequisite: Consent of the instructor.

565—**Advanced Labor Economics.** Four hours.

Prerequisite: ECO 365 or consent of instructor.

An advanced study of wage and employment theory, unionism, and current labor force problems.

592—**Special Problems.** Two or four hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

DEPARTMENT OF FINANCE (FIN)

Louis K. Brandt, Chairman

Aby Clements Jordan King
Sirmon West

G-415—**Government and Business.** Four hours.

Prerequisite: ECO 200 or 256.

A study of the place of government in the business world, with emphasis on types of controls, regulation of public service corporations and financial institutions, laws to enforce competition, and government aids to business.

G-462—**Security Analysis and Portfolio Planning.** Four hours.

Prerequisite: FIN 389.

To develop proficiency in the use of investment management tools for security evaluation, and to increase decision-making skill in planning portfolio needs of individuals and business enterprises.

G-472—**International Business Finance.** Four hours.

Prerequisite: FIN 389.

Concerned with the short- and long-run financial operations and specific cash and capital management problems of our increasing number of multinational businesses seeking to operate profitably abroad.

G-480—**Financial Management.** Four hours.

High-level analysis of internal and external financial decision-making issues. A systematic treatment, mainly by the case method, of major current long-term financial management problems.

530—**Problems in Finance.** Four hours.

Application of tested and experimental financial theory by financial managers to decision making problems relating to working capital and fixed capital management. Some emphasis placed upon quantitative tools and techniques for analysis and decision making.

540—**Managing Financial Institutions.** Four hours.

Gives the student an understanding of all of the major financial institutions, their organizational structures, functions, interrelationships, and methods of operation.

552—**Problems in Investments.** Four hours.

Application of tested and experimental theories by investment managers to problems of short and long-term decision making. Some emphasis upon quantitative tools and techniques applied to optimal investment goals.

580—**Seminar in Finance.** Four hours.

A study of selected problems in business finance.

585—**The Business Environment.** Four hours.

The relevant environmental pressures shaping the corporation are explored: government, labor, values and ethics, innovation and technology.

592—**Special Problems I, II.** Two or four hours.

This is a closely supervised course in individual study and research, emphasizing some issue of special interest to the student.

597—**Independent Study and Research.** Hours arranged.
Not to be counted as credit toward a degree.
Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library of other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

DEPARTMENT OF MANAGEMENT (MGT)

Martin Stegenga, Chairman

Bracey Davis Gottleber Sanford
Sweat

G-468—**Wage and Salary Administration.** Four hours.
Prerequisite: MGT 360.
A study of wage and salary levels and structures including job analysis, job evaluation, wage surveys, and incentive systems.

G-472—**Collective Bargaining.** Four hours.
Prerequisite: MGT 370.
A study of the practices, techniques, procedures, methods, and legal and administrative requirements of collective bargaining relationships.

G-482—**Production Problems Seminar.** Four hours.
Prerequisite: Consent of instructor.
A case approach to the study of selected current problems in manufacturing management.

G-484—**Problems in Personnel Administration.** Four hours.
Prerequisite: Consent of instructor.
An application through problem solving and case analysis of the principles and techniques in personnel administration decision making.

510—**Production Management.** Four hours.
Prerequisite: Permission of department chairman.
An analysis of managerial production functions and processes by focusing upon the transformation of inputs into goods and services. Input factors of management, materials and land, labor, and capital will be interrelated with production functions.

515—**Operations Research.** Four hours.
Prerequisite: Permission of department chairman.
An introductory course in the principles of Operations Research and Management Science.

520—**Problems in Management.** Four hours.
A case study of selected social, economic, industrial, and personnel problems.

525—**Human Relations in Business.** Four hours.
A study of the problems of individuals and groups resulting from modern business organizations and techniques.

560—**History and Philosophy of Management.** Four hours.
A review and analysis of the writings of Taylor, Gilbreth, Fayol, and later writers in the development of scientific and modern management.

565—**Organization Theory and Practice.** Four hours.

The design, analysis, and evaluation of organizational structures in a business environment. Included are contemporary developments in the behavioral sciences, communications, quantitative and scientific management.

570—**Business Policy.** Four hours.

Prerequisite: Completion of 24 hours of graduate work.

A study of the fields of policy-making and administration from a top management point of view. It integrates special fields of analysis and stresses the overall point of view in handling business problems.

592—**Special Problems in Management.** Two or four hours.

Prerequisite: Permission of department chairman.

Credit will be determined by the nature and scope of the research project.

598—**Thesis.** Six hours.

For students taking a management emphasis in the MBA program.

DEPARTMENT OF MARKETING (MKT)

Richard C. Vreeland, Chairman
Stevens

G-410—**Market Research.** Four hours.

Prerequisites: MKT 300 and MAT 320.

A study of principles and techniques used in market research and evaluation of such research.

G-475—**Promotion Development.** Four hours.

A study of the relationship of the business organization to the various interest groups which affect its promotional results, and the policies and procedures utilized in connection with such groups.

G-480—**Marketing Management.** Four hours.

A comprehensive course designed to synthesize the more specialized marketing knowledge of the student. The interrelation of all marketing activities in reaching the firms objectives is emphasized through the study of case histories.

535—**Seminar in Marketing.** Four hours.

An advanced study of marketing theories and phenomena.

540—**Market Planning.** Four hours.

A case study of the methods used by firms to reach their marketing goals.

550—**Market Research Seminar.** Four hours.

A study of advanced research techniques used in market analysis.

560—**Seminar in Marketing Theory.** Four hours.

A survey, analysis, and evaluation of the current research in marketing theory. Detailed attention is given to problems of determining the meaning and boundaries of marketing theory. The functional, psychological, and historical approaches are utilized. Emphasis is placed on the substantive content of marketing theories and their methodologies.

SCHOOL OF FINE ARTS

Raymond Mannoni, Dean
Gomer Pound, Assistant Dean

The School of Fine Arts currently offers graduate programs leading to the degrees of Master of Music, Master of Music Education, and Master of Arts. The Master of Music degree may be earned either in applied music, music history and literature, or in theory-composition. The Master of Arts may be earned in theatre.

The School of Fine Arts offers the Doctor of Philosophy and the Doctor of Music Education degrees in music education.

Courses are offered in art and allied arts for those who wish to elect them as a cognate area or who wish to renew teaching certificates.

Prescribed curricula for master's degree programs are listed below. As can be seen, they provide for some latitude and flexibility in arranging individual degree programs. Course selections must be approved by the student's advisory committee. The student's major professor will assist in every way possible, but final responsibility for following all general departmental regulations lies with the student.

Tests and Auditions

Examinations for advisory purposes are given to all new master's students during registration week and prior to their enrollment. New master's students should contact their coordinator or department chairman for a schedule of these examinations. Auditions for applied music majors are given at the same time. Approval of the graduate faculty in music must be obtained before a student is permitted to major in an applied music field.

Ensemble Participation

All graduate music students are required to participate in at least one ensemble each quarter they are in residence.

Deficiencies

The School of Fine Arts retains the right to determine deficiencies in the preparation of any graduate student, regardless of the number of course credits accumulated. The School will recommend appropriate means for removing such deficiencies.

ALLIED ARTS (AA)

Ira Schwarz, Coordinator

AA 500—**Aesthetics in the Arts.** Four hours.

A study of the formulation of aesthetic tastes. Emphasis is placed upon an analysis of artistic expression and the affective quality of experiences with the Fine Arts.

DEPARTMENT OF ART (ART)

Walter Lok, Chairman
Poirier

ARE 501—**Research in Art Education.** Two hours.

A study of current research and research techniques in the area. To include the compilation of bibliographic material and the organization of research projects.

ART 515—**Trends in Current Plastic Expression.** Four hours.

A course designed to keep the student abreast of current trends in the plastic arts.

ARE 525—**Seminar in Elementary Art Education and Supervision.** Four hours.

A study of the problems of teaching and supervising the public school program in art in grades one through six.

ARE 526—**Seminar in Secondary Art Education and Supervision.** Four hours.

A study of the problems of teaching and supervising the public school program in art in grades seven through twelve.

ART 551—**Painting Studio.** Four to twelve hours.

ART 552—**Drawing Studio.** Four to twelve hours.

ART 553—**Ceramic Studio.** Four to twelve hours.

ARE 592—**Special Studies in Art Education I, II, III.** One to three hours each.

ARE 597—**Independent Study and Research.** Hours arranged.

ARE 598—**Thesis.** Six hours.

A conventional thesis, or a catalogued exhibition, or an exhibition with a supporting paper.

MASTER'S DEGREE PROGRAMS IN MUSIC AND MUSIC EDUCATION

Joe Barry Mullins, Coordinator

Master of Music Degree in Applied Music

Applied Music	15 quarter hours
Recital 515	0 quarter hours
Selected work from the following	31 quarter hours
Total	46 quarter hours

Music Theory (Minimum of 6 quarter hours)

MUS G-411, G-412, G-413—Advanced Composition	(2-2-2)
MUS G-421, G-422, G-423—Advanced Counterpoint	(2-2-2)
MUS 511, 512—Pedagogy of Theory	(2-2)
MUS 521, 522, 523—Analytical Techniques	(2-2-2)

Music History and Literature (Minimum of 6 quarter hours)

MUS G-431—History of Opera	(4)
MUC G-432—American Music	(4)
MUS G-433—20th Century Music	(4)
MUS G-435—Baroque Music	(4)
MUC G-436—18th Century Music	(4)
MUS G-437—19th Century Music	(4)
MUS G-441A, G-442A, G-443A—Vocal Literature	(2-2-2)
MUS G-441B, G-442B, G-443B—Piano Literature	(2-2-2)
MUS G-441C, G-442C, G-443C—Organ Literature	(2-2-2)
MUS G-441D, G-442D, G-443D—Instrumental Literature	(2-2-2)
MUS G-441E, G-442E, G-443E—Choral Literature	(2-2-2)
MUS G-441F, G-442F, G-443F—Symphonic Literature	(2-2-2)

MUS G-441H, G-442H, G-443H—Chamber Music (2-2-2)
MUS G-462—Hymnology (4)
MUS 550—Seminar in the History of Church Music (4)
MUS 551—Liturgies (2)
MUS 552—Gregorian Chant (2)
MUS 561, 562, 563—Seminar in Music Literature (2-2-2)

Electives

MUS G-463—Administration of Church Music (2)
MUS 516—Research Essay (3)
MUS 520—Musical Acoustics (4)
MUS 592—Special Studies I, II, III (1-3 hours each)*
MED 516—Music Programs for Community and Junior Colleges (4)
MED 532—Graduate Conducting I (2)
MED 555—Psychology of Music (4)
AA 500—Aesthetics in the Arts (4)
Study in a cognate area (8)

Master of Music Degree in Music History and Literature

MUS 500, 501—Introduction to Research	4 quarter hours
MUS 521, 522, 523—Analytical Techniques	6 quarter hours
MUS 593—Notation	4 quarter hours
MED 598—Thesis	6 quarter hours
Applied Music	3 quarter hours
Selected work from the following	23 quarter huors
Total	46 quarter hours

Music History and Literature Core Courses (Minimum of 12 quarter hours)

MUS G-431—History of Opera (4)
MUS G-432—American Music (4)
MUS G-433—20th Century Music (4)
MUS G-435—Baroque Music (4)
MUS G-436—18th Century Music (4)
MUS G-437—19th Century Music (4)
MUS 561, 562, 563—Seminar in Music Literature (2-2-2)

Electives

MUS G-441A, G-442A, G-443A—Vocal Literature (2-2-2)
MUS G-441B, G-442B, G-443B—Piano Literature (2-2-2)
MUS G-441C, G-442C, G-443C—Organ Literature (2-2-2)
MUS G-441D, G-442D, G-443D—Instrumental Literature (2-2-2)
MUS G-441E, G-442E, G-443E—Choral Literature (2-2-2)
MUS G-441F, G-442F, G-443F—Symphonic Literature (2-2-2)
MUS G-441H, G-442H, G-443H—Chamber Music (2-2-2)
MUS 520—Musical Acoustics (4)

MUS 550—Seminar in the History of Church Music (4)
MUS 551—Liturgies (2)
MUS 552—Gregorian Chant (2)
MUS 592—Special Studies I, II, III (1-3 hours each)
MED 536—Band Literature (2)
MED 555—Psychology of Music (4)
AA 500—Aesthetics in the Arts (4)
Study in a cognate area (8)

Master of Music Degree in Theory-Composition

MUS G-411, G-412, G-413—Advanced Composition	6 quarter hours
MUS 514—Composition in a Large Form, or MED 598—Thesis	6 quarter hours
MUS 521, 522, 523—Analytical Techniques	6 quarter hours
Applied Music	3 quarter hours
Selected work from the following	25 quarter hours
Total	46 quarter hours

Music History and Literature (Minimum of 6 quarter hours)

MUS G-431—History of Opera (4)
MUS G-432—American Music (4)
MUS G-433—20th Century Music (4)
MUS G-435—Baroque Music (4)
MUS G-436—18th Century Music (4)
MUS G-437—19th Century Music (4)
MUS G-441A, G-442A, G-443A—Vocal Literature (2-2-2)
MUS G-441B, G-442B, G-443B—Piano Literature (2-2-2)
MUS G-441C, G-442C, G-443C—Organ Literature (2-2-2)
MUS G-441D, G-442D, G-443D—Instrumental Literature (2-2-2)
MUS G-441E, G-442E, G-443E—Choral Literature (2-2-2)
MUS G-441F, G-442F, G-443F—Symphonic Literature (2-2-2)
MUS G-441H, G-442H, G-443H—Chamber Music (2-2-2)
MUS G-462—Hymnology (4)
MUS 550—Seminar in the History of Church Music (4)
MUS 551—Liturgies (2)
MUS 552—Gregorian Chant (2)
MUS 561, 562, 563—Seminar in Music Literature (2-2-2)

Electives

MUS 511, 512—Pedagogy of Theory (2-2)
MUS 513—Seminar in Music Theory (2)
MUS 520—Musical Acoustics (4)
MUS 592—Special Studies I, II, III (1-3 quarter hours each)
MED 516—Music Programs for Community and Junior Colleges (4)
MED 532—Graduate Conducting I (2)
MED 555—Psychology of Music (4)
AA 500—Aesthetics in the Arts (4)
Applied Music (1-1-1)
Study in a cognate area (8)

Master of Music Education Degree

MED 525, 526, 527—Seminar in Music Education	6 quarter hours
*MED 598—Thesis	6 quarter hours
Applied Music	3 quarter hours
Selected work from the following	31 quarter hours
Total	46 quarter hours

Music Education (Minimum of 10 quarter hours)

MED G-423A—Curriculum Problems in Music Education	(2)
MED G-423B—Organization and Administration for School Orchestra and Bands	(2)
MED G-425—Advanced Strings Methods	(2)
MED G-427—Advanced Winds Methods	(2)
MED G-429—Percussion Methods	(2)
MED 510—Advanced Topics in Instrumental Music	(2)
MED 512—Advanced Topics in Vocal Music	(2)
MED 514—Organization and Administraion of School Music Programs	(4)
MED 516—Music Programs for Community and Junior Colleges	(4)
MED 532—Graduate Conducting I	(2)
MED 536—Band Literature	(2-2)
MED 555—Psychology of Music	(4)
MED 556, 557—Evaluation and Guidance in Music Education I II	(2-2)
MUS 592—Special Studies I, II, III	(1-3 quarter hours each)
MUS G-441E, G-442E, G-443E—Choral Literature	(2-2-2)
Applied Music	(1-1-1)

Electives: (Minimum of 6 quarter hours in Theory and 6 in History or Literature)

MUS G-431—History of Opera	(4)
MUS 432—American Music	(4)
MUS G-433—20th Century Music	(4)
MUS G-435—Baroque Music	(4)
MUS G-436—18th Century Music	(4)
MUS G-437—19th Century Music	(4)
MUS 500—Introduction to Research	(2)
MUS 511, 512—Pedagogy of Theory	(2-2)
MUS 520—Musical Acoustics	(4)
MUS 521, 522, 523—Analytical Techniques	(2-2-2)
MUS 561, 562, 563—Seminar in Music Literature	(2-2-2)
MUS 586, 587, 588—Arranging for School Bands, Choruses, and Orchestras	(2-2-2)

AA 500—Aesthetics in the Arts ..... (4)
Study in a cognate area ..... (8)

*Eight hours of electives in music may be taken in lieu of thesis.

DOCTORAL PROGRAMS IN MUSIC EDUCATION

The degrees of Doctor of Philosophy in Music Education and Doctor of Music Education are offered to candidates who pursue the course of study with distinction and who show ability to do research and scholarly study. General requirements for the Ph.D. and Ed.D. (the D.M.Ed. general requirements are the same as the Ed.D.) degrees are found in Part IV of this **Bulletin.** The School of Fine Arts further stipulates the following requirements.

ADMISSION: An applicant for admission to doctoral study in music education must possess a master's degree in music education, or its equivalent, from an approved institution. A complete record of previous education and experience, accompanied with recommendations from responsible persons who are personally acquainted with the applicant and his work are required to support all applications for admission to doctoral study in music education. A personal interview may be required by the School of Fine Arts. Each applicant must have at least three years successful teaching experience. If the degree work is concerned with college administration, the applicant must have at least three years experience in a college or university or equivalent.

RESEARCH TOOLS: Candidates for the Ph.D. degree in music education must comply with the language requirements as specified for Ph.D. candidates in Part IV of this **Bulletin.** A candidate for the D.M.Ed. degree is required to demonstrate proficiency in statistics. At the discretion of the graduate faculty, this candidate may be required to demonstrate a reading knowledge of one modern foreign language.

All doctoral candidates in music education are required to take MED 514 (Organization and Administration of School Music Programs), MUS 630 (History of Style of Music), MUS 696 (Seminar in Performance Practices), and MED 625, 626 (Doctoral Seminar in Music Education). The remaining course work will be determined in light of the candidate's qualifying examination, his interests, and the counsel of his major professor and advisory committee. In planning this program, the following minimum distribution of graduate courses (including master's degree work) is required: thirty-six (36) hours in music education, sixteen (16) to eighteen (18) hours in musicology, sixteen (16) to eighteen (18) hours in music theory, twelve (12) hours in education, and thirty-six (36) to thirty-eight (38) hours of approved electives. Although Part IV of this **Bulletin** states that 118 hours are required for doctoral degrees, it should be clearly understood that few candidates are able to receive a degree on the basis of this minimum. The distinction implied by the degree and the traditions relating to it require comprehensive knowledge and demonstration of a high degree of proficiency in the major field and related areas of study, as well as the ability to conduct advanced research.

COURSE DESCRIPTIONS

APPLIED MUSIC AND ORGANIZATION (APM)

501-502-503—**Piano.** One to five hours each quarter.

511-512-513—**Organ.** One to five hours each quarter.

521-522-523—**Strings (Violin or 'Cello).** One to five hours each quarter.

531-532-533—**Woodwinds.** One to five hours each quarter.

541-542-543—**Brass.** One to five hours each quarter.

551-552-553—**Percussion.** One to five hours each quarter.

561-562-563—**Voice.** One to five hours each quarter.

DEPARTMENT OF MUSIC (MUS)

David Foltz, Chairman

Andersen Benner Donohue Fitch A. Gower Hill Huck
Imbragulio Mannoni Mullins Nowakowski Overmyer
Presser Stocker

COURSE DESCRIPTIONS

G-411,G-412,G-413—**Advanced Composition.** Two hours each.
Writing in larger forms for various choral and instrumental combinations.

G-421,G-422,G-423—**Advanced Counterpoint.** Two hours each.
Eighteenth century canons and fugal writing. Sixteenth century writing in madrigal style.

G-431—**History of Opera.** Four hours.
The history of musical theatre from Greek drama to present. Open to non-music majors with consent of instructor.

G-432—**American Music.** Four hours.
A study of the development of music in North America with particular emphasis in three areas; (1) European heritage, (2) jazz, (3) composers of the twentieth century whose idioms evidence strong roots in American culture. Open to non-music majors with consent of instructor.

G-433—**20th Century Music.** Four hours.
Examination of musical trends since Debussy and Mahler. Open to non-music majors with consent of instructor.

G-435—**Baroque Music.** Four hours.
The development of musical styles and forms from Monteverdi through J. S. Bach.

G-436—**18th Century Music.** Four hours.
The development of classical styles and forms, with particular emphasis on **style gallant,** the Mannheim school, **Empfindsamer Stil,** and the Viennese classicists.

G-437—**19th Century Music.** Four hours.

The development of musical romanticism, with emphasis on the transformation and expansion of classical forms and the appearance of new formal and stylistic concepts.

G-441A, G-442A, G-443A—**Vocal Literature.** Two hours each.

G-441B, G-442B, G-443B—**Piano Literature.** Two hours each.

G-441C, G-442C, G-443C—**Organ Literature.** Two hours each.

G-441D, G-442D, G-443D—**Instrumental Literature.** Two hours each.

G-441E, G-442E, G-443E—**Choral Literature.** Two hours each.

A survey of accompanied and unaccompanied choral music from Gregorian chant to the present. Open to non-music majors with consent of instructor.

G-441F, G-442F, G-443F—**Symphonic Literature.** Two hours each.

The history and literature of the symphony orchestra from 1600 to the present. Open to non-music majors with consent of instructor.

G-441H, G-442H, G-443H—**Chamber Music.** Two hours each.

A survey of music for small instrumental ensembles. Open to non-music majors with consent of instructor.

G-462—**Hymnology.** Four hours.

The history of the Christian hymn from its roots to present-day forms.

G-463—**Administration of Church Music.** Two hours.

Practical aspects of church music are presented in this course, such as: building a church library, organizing and directing various church choirs, the volunteer choir system, directing from the console, etc.

500, 501—**Introduction to Research.** Two hours each.

The study of research techniques: bibliographical compilation; investigation of standard reference literature; writing of research papers. The second quarter investigates more thoroughly those areas of research of particular interest to students of musicology.

511, 512—**Pedagogy of Theory.** Two hours each.

A course in the teaching of theory.

513—**Seminar in Music Theory.** Two hours.

Prerequisite: Theory-Composition major, or consent of instructor.

514—**Composition in a Large Form.** Six hours.

Open to students with a major in theory-composition.

515—**Recital.** 0 hours.

Required for a major in applied music. The candidate must be granted approval to present his recital by an auditioning committee made up of the applied faculty of the major area and representatives of the music graduate faculty at least five weeks prior to the recital date.

516—**Research Essay.** Three hours.

520—**Musical Acoustics.** Four hours.

An investigation into the nature and preception of musical sounds designed to lead to a better undersanding of problems of tone production, intonation, and allied musical aspects.

521, 522, 523—**Analytical Techniques.** Two hours each quarter.
A course in the techniques of harmonic and contrapuntal analysis.

550—**Seminar in History of Church Music.** Four hours.

551—**Liturgies.** Two hours.
Liturgy in worship: the Jewish, Eastern Orthodox, and Roman Catholic liturgies and their music; liturgies of the Reformation period; music of the Lutheran, Calvinist, and Anglican churches; music of non-liturgical churches.

552—**Gregorian Chant.** Two hours.
This course is designed to acquaint the student with the history and development of Gregorian chant, with literature and recordings for demonstration purposes. Practical experience in conducting Gregorian chant is offered also.

561, 562, 563—**Seminar in Music Literature.** Two hours each.
Study of music of individual composers, or of special areas of music literature.

586—**Arranging for School Bands.** Two hours.

587—**Arranging for School Choruses.** Two hours.

588—**Arranging for School Orchestras.** Two hours.

592—**Special Studies I, II, III.** One to three hours each.
Investigation of specialized areas of interest within the broad field of music, with emphasis on individual research. A committee of not less than three graduate faculty is appointed to evaluate the results of each study.

593—**Notation.** Four hours.
Study of the forms of musical notation from the Middle Ages to the present day, with particular emphasis on the notation of polyphonic music prior to 1600.

630—**History of Style in Music.** Four hours.
Detailed analysis of selected musical works from antiquity to the 20th century. Special emphasis is placed upon the identification of style determinants. Doctoral students only.

692—**Special Studies I, II, III.** One to three hours each.
Doctoral students only.

696—**Seminar in Performance Practices.** Two hours.
A seminar in the performance of music from selected periods, with emphasis on music composed before 1800. Transcription of older music into forms suitable for performance by modern media. Doctoral students only.

DEPARTMENT OF MUSIC EDUCATION (MED)

William Gower, Chairman

Carnovale Donovan Johnston Madsen Munsell Neumann
Pound Prenshaw Zahrt

COURSE DESCRIPTIONS

G-423A—**Curriculum Problems in Music Education.** Two hours.
Intensive research into, and discussion concerning, current values and trends in music education in America.

G-423B—**Organization and Administration of School Orchestras and Bands.** Two hours.

Techniques of promoting and maintaining successful orchestras, bands, and instrumental ensembles; research by students; emphasis on problems of marching bands and pageantry.

G-425—**Advanced Strings Methods.** Two hours.

G-427—**Advanced Winds Methods.** Two hours.

A study of basic and advanced techniques in the pedagogy of all the major woodwind and brass instruments with emphasis upon tone production.

G-429—**Percussion Methods.** Two hours.

G-463—**Principles of Music in Action.** Four hours. Winter and Summer.

Prerequisite: MED 362 or equivalent.

A further refinement in music skills designed specifically for the minor in fine arts for elementary teachers. A laboratory course in basic theory, keyboard, conducting, rhythmics, class instruments, and creative listening. May not be applied toward a Master of Music or Master of Music Education degree.

G-490A, G-491A, G-492A—**Piano Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

G-490B, G-491B, G-492B—**Instrumental Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

G-490C, G-491C, G-492C—**Choral Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

G-490E, G-491E, G-492E—**Elementary Music Workshop.** 1½ hours each.

Cannot be applied toward a music degree.

510—**Advanced Topics in Instrumental Music.** Two hours.

Investigation of current trends and practical topics in instrumental music education, with an emphasis on secondary and collegiate instruction.

512—**Advanced Topics in Vocal Music.** Two hours.

Investigation of current trends and practical topics in vocal music education, with an emphasis on secondary and collegiate instruction.

514—**Organization and Administration of School Music Programs.** Four hours.

A study of the organization, supervision, and evaluation of the total school music program, including problems of finance, in-service training, consultants, and selection of personnel and equipment.

516—**Music Programs for Community and Junior Colleges.** Four hours.

A study of the evolution of music programs in junior colleges throughout the United States, with an emphasis upon influences, programs, and services of junior colleges in Mississippi.

525, 526, 527—**Seminar in Music Education.** Two hours each.

Required of all students pursuing the master's degree in music education. Open by permission to other interested students. This course reviews current philosophies of education and their application to the music curriculum. In addition, the student will engage in studies of individually chosen problems of special interest.

532—**Graduate Conducting I, II, III.** Two hours each.

536—**Band Literature.** Two hours.

A study of band literature from its emergence to present. Emphasis is placed on individual research and preparation of representative literature for performance.

555—**Psychology of Music.** Four hours.

A course designed particularly for the teacher or prospective teacher of music. Review of fundamental concepts from the science of psychology. Special study in the areas of auditory perception, motivation, and personality, leading to an understanding of individual differences in musical capacities and concomitant application in teaching.

556, 557—**Evaluation and Guidance in Music Education I, II.** Two hours each.

The administration and interpretation of tests of musical talent and musical achievement. Practical application of tests results, inventories and other devices in the teaching and guidance of music students in public schools, colleges, and universities.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours.

No thesis will be accepted unless accompanied by an abstract. Theses which employ questionnaires will not be accepted unless accompanied by summaries of the findings to be mailed to respondents.

625—**Doctoral Seminar In Music Education.** Four hours.

Orientation to doctoral study. Studies in the history and philosophy of music education.

626—**Doctoral Seminar In Music Education.** Four hours.

Primary focus on advanced research methods, techniques, and procedures appropriate to the doctoral level of music education. Individual projects to develop skill in reporting research.

627—**Teaching Music in Higher Education.** Two hours.

A seminar dealing with problems of teaching music in institutions of higher learning. Doctoral students only.

629—**Administration of College and University Music Programs.** Two hours.

Doctoral students only.

791—**Research in Music Education.** One to twelve hours.

Prerequisite: Approval of the major professor.

797—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a dissertation and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

798—**Dissertation.**

DEPARTMENT OF THEATRE (THE)

I. Blaine Quarnstrom, Chairman

Hartwig

For the Master of Arts degree, the Department of Theatre requires successful completion of forty-six (46) hours, thirty-four (34) of which must be in theatre. The remaining twelve (12) hours may be chosen from graduate courses in related fields. Theatre 501 and 506 are required of all students in the program. The remaining twenty-eight (28) hours in theatre will be elected with the advice of the student's committee.

COURSE DESCRIPTIONS

G-401—**History and Design of Costumes.** Four hours.
Prerequisite: Consent of instructor.
Study of historial and contemporary costume designs and their methods of construction for theatrical presentations.

G-412—**Stage Lighting.** Four hours. Winter.
Prerequisite: Consent of instructor.
Theory and application of general and special lighting, color, instrumentation, and control.

G-416—**Playwrighting.** Four hours.
Prerequisite: Consent of instructor.
Study and research in the elements of play structuring.

G-417—**Advanced Acting.** Four hours.

G-420—**Advanced Theory of Stage Directing.** Four hours.
Prerequisite: THE 320 or equivalent.

G-421, G-422—**History of The American Theatre.** Four hours each.

G-425—**Lyric Theatre.** Four hours.
A study of musical theatres and their literatures, together with an analysis of the uses of music in theatrical presentations.

G-427, G-428, G-429—**History of European Theatre.** Four hours each.

G-430, G-431—**Summer Theatre I, II.** Four hours each.
Prerequisite: Consent of staff.
An eleven-week program covering all phases of theatre production.

G-435—**Advanced Scene Design.** Four hours.
Prerequisite: THE 306 or consent of instructor.

G-480—**Directing Children's Theatre.** Four hours.
Prerequisites: THE 320, THE 420, and consent of instructor.
The techniques of directing, organizing, and administrating a children's theatre program in all phases of application.

501—**Introduction to Graduate Study in Theatre.** Two hours.

Seminar in methods and materials of research in theatre; introduction to the bibliography of the field; organization and form of thesis. Initial enrollment in the program must be in this course.

506—**Dramatic Theory and Criticism.** Four hours.

Examination and evaluation of dramatic theory from antiquity to present.

510—**Contemporary Trends in European Theatre.** Four hours.

511—**Seminar: Contemporary Trends in American Theatre.** Four hours.

588—**Practicum in University Theatre.** Four hours.

Directed independent study and practical application in an area of theatre production.

589—**Practicum in Community Theatre I, II.** Six hours each. Fall and Winter.

Prerequisite: 24 hours of graduate work.

Field training in residence at an approved community theatre. Fall and Winter quarters taken consecutively.

591—**Research in Theatre.** One to twelve hours.

592—**Special Studies I, II, III.** One to three hours each, for a maximum of 9 hours.

Investigation into specialized areas of interest within the broad area of theatre, with emphasis on individual research.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis in Theatre.** Six hours.

SCHOOL OF HOME ECONOMICS

Sarah L. Weaver, Dean

Chichester Drain Faulkinberry Golden Hamman
McCarthy Milner

Graduate work in the School of Home Economics offers the opportunity to earn the Master of Science degree.

GENERAL POINTS

I. Graduate work in the major field of specialization must be preceded by course work sufficient to satisfy undergraduate requirements for a major or enough related work to indicate the student's ability to do graduate work in his major field. Graduate work in the minor field of specialization must be preceded by at least enough course work to satisfy the undergraduate requirements for a minor or enough related work to indicate that the student can successfully do graduate work in the minor field. Deficiencies in a student's background in his major fields of specialization may be made up by auditing recommended undergraduate courses.

A. **Major and Minor Areas.**

1. Suggested **major** areas:

   Child Development
   Family Living
   Home Economics Education
   Institution Management

2. Suggested **minor** areas:

   Child Development
   Clothing and Textiles
   Equipment
   Family Living
   Food and Nutrition
   General Home Economics
   Home Management
   Psychology
   Sociology

B. **Suggested Combinations:**

Major	Minor
Child Development	Family Living or Food and Nutrition
Family Living	Child Development or Food and Nutrition or Home Management
Home Economics Education	General Home Economics
Institution Management	Food and Nutrition or Equipment

II. Upon the completion of the graduate program, a comprehensive oral examination covering major and minor fields will be required to fulfill the qualifications for a degree.

III. Students may have the option of the thesis plan or the non-thesis plan. A four-quarter-hour course in research must be completed regardless of the choice of plan — thesis option or non-thesis option. Those preparing for teaching on the college level or for supervisory positions in home economics are advised to write a thesis. Others may follow the non-thesis plan.

A. Thesis Plan

1. Home Economics Education majors ..... 48 hours

Major Area ..... 24 hours
- CIF 504 ..... 4 hours
- Thesis (598) ..... 6 hours
- RED 501 ..... 4 hours
- Other ..... 10 hours

Minor (General Home Economics recommended) ..... 24 hours

2. Other Home Economics majors ..... 46 hours

Major Area ..... 24 hours
- RED 501 ..... 4 hours
- Thesis (598) ..... 6 hours
- Other ..... 14 hours

Minor 16
Electives 6

B. Non-Thesis Plan

All students working toward the Master of Science degree in Home Economics must meet the following requirements:

1. Twenty (20) hours in a major area. Four (4) to six (6) hours of this work are to be a field study, a special problem, or an internship in or related to the specialized area (Example: Graduate work at Merill Palmer as approved in 1955). This part of the program must be preceded by RED 501, or the equivalent, and sufficient course work to satisfy the student's advisory committee.

2. Sixteen hours (16) for a minor in an area other than that of the major.

3. Four (4) hours of RED 501.

4. Six (6) additional hours of electives (making total hours forty-six.)

Home Economics Education majors must meet the following requirements (forty-eight (48) hours):

1. CIF 504 (four (4) hours) must be taken as a part of the twenty (20) hours required for the major.

2. Twenty-four (24) hours for a minor in an area other than Home Economics Education. General Home Economics is recommended.

3. RED 501 (four (4) hours).

COURSE DESCRIPTIONS

CHILD DEVELOPMENT (CD)

G-420—**Advanced Child Development.** Four hours.

This course is for students interested in further study of pre-school children and in developing techniques and accepting full responsibilities in the daily activity of the nursery school.

Special problems will be included on the graduate level.

G-450—**Symposium in Child Development.** Two hours.

Prerequisite: Consent of instructor.

A study of theories and recent research used in preschool education; role of preschool education in the total education system. For home economics teachers, preschool teachers, and others interested in experience in the guidance of young children.

592—**Special Problems in Child Development.** Two to six hours.

594—**Seminar in Child Development.** Two to six hours.

596—**Research in Child Development.** Two to six hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

CLOTHING AND TEXTILES (C&T)

G-452—**Textile Testing.** Four hours.

Two 1-hour and two 2-hour periods per week.

Prerequisite: C&T 312 or 360 or approval of department chairman.

Testing apparel and household textile fabrics by standard ASTM and AATCC methods; interpreting and evaluating test results; application of data to better consumer understanding and practices.

G-456—**Textile Economics.** Two hours.

Prerequisite: C&T 312 or C&T 360 or the equivalent.

A study of problems which affect the consumer in the production, distribution, and consumption of textiles and clothing. Survey of recent developments in the textile and clothing field.

G-460—**Apparel Design.** Four hours.

Prerequisite: C&T 304, 312, or 360.

Development of original designs for apparel items.

560—**Apparel Designing Through Draping.** Four hours.

Two 1-hour and two 2-hour periods per week.

Prerequisite: Permission of instructor.

Creative dress design through draping principles and procedures; study of leading designers, their techniques, and places in the market.

565—**Flat Pattern Design.** Four hours.

Two 1-hour and two 2-hour periods per week.

Prerequisite: Permission of instructor.

Creative dress design through the principles and application of flat pattern techniques; emphasis on solving figure problems; study of manufacturing process of commercial patterns; setting sizing standards.

570—**Textiles: Recent Developments.** Two hours.
Prerequisite: C&T 312 or 360 or equivalent.

590—**Institute on the Bishop Method of Clothing Construction.** One and one-half hours. Basic Course.

591—**Institute on the Bishop Method Applied to Tailoring.** One and one-half hours.

592—**Special Problems in Clothing and Textiles.** Two to six hours.

596—**Research in Textiles and Clothing.** Two to six hours.
Prerequisite: Permission of instructor.

FOOD AND NUTRITION (F&N)

G-442—**Experimental Foods.** Four hours.
Prerequisite: F & N 285.

G-444—**The School Lunch.** Four hours.

G-459—**Institution Food Purchasing.** Four hours.

G-476—**Diet in Disease.** Four hours.
Prerequisite: F & N 335.

G-478—**Advanced Nutrition.** Four hours.
Four 1-hour periods per week.
Prerequisite: F & N 335.

575—**Community Health and Nutrition.** Four hours.

577—**The Nutrition of Children.** Four hours.

578—**Quantity Food Preparation.** Four hours.
Prerequisite: Approval of instructor.
One lecture and six hours of laboratory per week.

579—**School Lunch Supervision.** Four hours.

580—**Institution Organization and Administration.** Four hours.
Analysis of quantity food service operations as related to methods of control, selection and training of personnel, labor laws, employer-employee relationships so as to produce a system of order into a group of related activities and provide the means for their direction and development.

592—**Special Problems in:**

a. Nutrition. Two to six hours.

b. Institution Management. Two to six hours.

594—**Seminar in Food and Nutrition.** Two to six hours.

596—**Research in Food and Nutrition.** Two to six hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

HOME ECONOMICS EDUCATION (HEE)

500—**Supervision of Home Economics.** Four hours.

Designed for high school home economics teachers interested in the student-teacher program. The course stresses the supervisory practices and procedures for promoting student-teacher growth and development. Supervisory problems in guidance of students for home economics education teachers will be included.

502—**Home Economics in American Education.** Four hours.

This course is a brief survey of home economics in American education. It is designed to give understanding of the trends and issues in curriculum development, instruction, guidance, supervision, administration and research in this field.

504—**Curriculum Problems in Home Economics.** Four hours.

A course for teachers which deals with problems in curriculum making. It will include the place of home economics education in the total school curriculum for that specialized area. Opportunity will be given for students to work out practical problems relating to their local schools.

510—**Home Economics in Higher Education.** Four hours.

Home economics at the college level will be studied with special reference to that of the junior college. Problems in development of the curriculum, in college instruction, in guidance of students, in administrative problems, and in evaluation of a department will be considered.

514—**Teaching Home Economics to Adults.** Four hours.

A study of the adult home economics education programs with experiences which will help toward effective participation in them whether for the gainfully employed or the full-time homemaker. Special problems will be included.

516 —**Consumer Home Economics Education.** Four hours.

A course designed to acquaint the student with consumer problems in our present day society. Curriculum materials pertinent to teaching consumer education on the secondary level will be developed.

552—**Teaching Family Living on the Secondary Level.** Four hours.

592—**Special Problems in Home Economics Education.** Two to six hours.

594—**Seminar in Home Economics Education.** Two to six hours.

596—**Research in Home Economics Education.** Two to six hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

HOUSING AND HOME MANAGEMENT (H&HM)

540—**Home Engineering.** Four hours.

This course includes a study of the selection, placement, and storage of home appliances and their use as related to the mechanical features. Considerable time will be spent in design characteristics of the various appliances and the media used. The adaptation of certain activities to adult programs, as well as to the junior and the senior high school, will be made.

592—**Special problems in any of the following areas:** Two to six hours.

a. Household Equipment
b. Housing
c. Home Furnishings
d. Home Management

MARRIAGE AND FAMILY LIFE (M&FL)

550—**Early Marriage Adjustments.** Four hours.

A study will be made of college marriages.

551—**The Family in the Community.** Four hours.

Designed to help the teacher understand better the social setting in which students live and its importance in the development of family living courses to meet student needs.

554—**Parents and Children.** Four hours.

592—**Special Problems in Family Living.** Two to six hours.

594—**Seminar in Family Living.** Two to six hours.

596—**Research in Family Living.** Two to six hours.

597—**Independent Study and Research.** Hours arranged.

Not to be counted as credit toward a degree.

Students who are not in residence but who are actively working on a thesis and consulting with the major professor or making use of the library or other University facilities must enroll in this course.

598—**Thesis.** Six hours. Credit deferred until thesis is completed.

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